

ABSTRACT

Title of Document: SOCIAL COGNITIVE AND SELF-CONSTRUAL
PREDICTORS OF ACADEMIC SATISFACTION
AMONG AFRICAN STUDENTS ATTENDING
U.S. UNIVERSITIES

Ijeoma Ezeofor, Master of Arts, 2013

Directed By: Professor Robert W. Lent
Department of Counseling, Higher Education, and
Special Education

The purpose of this study was to examine select sociocognitive, environmental, and cultural factors that may relate to African students' academic satisfaction. The Social Cognitive Career Theory (SCCT) satisfaction model (Lent, 2004) was used as a framework to test the predictive utility of these factors with students of African descent. The study also examined self-construal as a predictor of academic satisfaction. Self-construal is the way one's thoughts, behaviors, and feelings are guided by one's relationship to self and others (Markus & Kitayama, 1991). The present study revealed that the factors of the satisfaction model accounted for 59% of the variance in academic satisfaction in the African sample. The findings also suggested that self-construal does not influence academic satisfaction directly but rather operates through mediated pathways. Research and practical implications of the findings are discussed.

SOCIAL COGNITIVE AND SELF-CONSTRUAL PREDICTORS OF ACADEMIC
SATISFACTION AMONG AFRICAN STUDENTS ATTENDING U.S.
UNIVERSITIES

by

Ijeoma Ezeofor

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Advisory Committee:

Professor Robert W. Lent, Chair
Professor Matthew J. Miller
Professor Jonathan J. Mohr

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CHAPTER 1: INTRODUCTION

Academic Satisfaction and African Students

College plays a critical role in the lives of students (Pascarella & Terenzini, 1991). Therefore, satisfaction with one's academic experience is of tantamount importance and understanding the factors that predict academic satisfaction for college and university students is a necessary endeavor. Moreover, attention should be paid to examining this concept for specific sub-populations of students (e.g., non-traditional students, veteran students, immigrant students) as it may lead to a more refined understanding of the factors that contribute to academic satisfaction for these students. The present study examines academic satisfaction in students of direct African descent (i.e., 1st, 1.5¹, and 2nd generation African students).

African students represent a population of students whose unique experiences have been minimally studied (Capps, McCabe, & Fix, 2012; Kamya, 1997; Stebleton, 2010). While African students have likely been included in the myriad of studies examining academic satisfaction in Black students, these studies often lack analyses of within-group differences (Fleming, 1981; Karemera, Reuben, & Sillah, 2003; Strayhorn, 2011; Strayhorn & Terrell, 2007). Thus, they tend to discount how differences in the cultural adjustment and social learning experiences of different members of the African Diaspora (e.g., Jamaicans, descendants of black American slaves, Afro-Cubans) may manifest differently in the academic satisfaction experiences of these different groups (Okeke-Ihejirika, 2010; Sellers, Chong, & Harris, 2007).

Academic satisfaction is uniquely important for African students given the

¹ Awokoya and Harushimana (2011) describe *1.5 generation* Americans as those who arrived in the United States "at or below the high school level" and *2nd generation* as those born in the US and raised by immigrant parents (p.211).

relationship Africans have with educational attainment. For Africans, pursuing higher education is perceived as an obligation rather than a choice (Amayo, 2007). Being a “degree-holder” within the African community elevates the financial and social standing of the individual and his or her family, compelling many Africans to doggedly pursue academic degrees and honors (Amayo, 2007). Students are encouraged to view their education not simply as a means to an end, but as the end itself—success in one’s education is success in life (Ogbaa, 2003). As a result of this emphasis on education, African immigrants are one of the most highly educated groups in the US (Capps et al., 2012) and 1.5 and 2nd generation African students are expected to achieve and exceed these same levels of educational attainment. An overrepresentation of children of Black immigrants in Ivy and non-Ivy League public and private universities as compared to their multi-generational Black peers has been noted by several writers (Anna, 2007; Fears, 2007; Massey, Mooney, Torres, & Charles, 2007; Rimer & Arenson, 2004).

The importance of academic satisfaction as a variable in the positive educational experiences of college students, coupled with the importance placed on higher education within the African community, suggests it would be valuable to seek a better understanding of the academic satisfaction of African students in the US. Using theories that explicate the processes underlying academic satisfaction is particularly useful in this regard.

Predicting Academic Satisfaction

One model for exploring academic satisfaction is the Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) model of domain and life satisfaction (Lent, 2004). The satisfaction model is the fourth model to follow three models—the

choice model, interest model, and performance model—initially posited by SCCT. Lent et al. (1994) posited these segmental models of development to unify various theories of career development. The satisfaction model integrates many factors (i.e., environmental supports and resources; self-efficacy expectations; outcome expectations; goal progress; and personality traits and affective dispositions) to explain the development of domain and life satisfaction (Lent, 2004). Built on Albert Bandura's (1986) social cognitive theory, the SCCT satisfaction model maintains that "...by engaging in self-efficacy-building and valued life activities, setting and making progress at meaningful personal goals, or seeking out needed social resources, individuals have the opportunity to partly steer themselves toward happiness" (Sheu & Lent, 2008, p. 49).

Since its introduction, several studies have tested this model (e.g., Duffy & Lent, 2009; Lent et al., 2005; Singley et al., 2010). The model's validity in cross-cultural contexts has also been explored (Hui, Lent, & Miller, 2013; Lent, Taveira, Sheu, & Singley, 2009; Ojeda, Flores, & Navarro, 2011). Findings have generally shown support for the hypothesized relationships of self-efficacy to environmental supports and goal progress. However, the findings involving the relations of outcome expectations to goal progress and academic domain satisfaction have been mixed (e.g., Lent et al., 2005). Given these early results, Sheu and Lent (2008) suggested the value of further work on the cross-cultural generalizability of SCCT's satisfaction model.

Cultural Adaptations of the SCCT Satisfaction Model

Recently, a few researchers have added culture-specific factors to studies of SCCT in order to help explain additional variance in satisfaction among individuals from different ethnic groups (Hui et al., 2013; Ojeda et al., 2011; Sheu, Chen, Lin, & Chong,

2011). In a study of academic satisfaction in Asian and Asian American college students, Hui et al. (2013) proposed that students' levels of acculturation, "the degree to which a person adheres to the cultural norms of the dominant society," and enculturation, "the process of retaining the cultural norms of one's indigenous culture" (Kim, Atkinson, & Umemoto, 2001, p. 579) would predict their academic satisfaction. They found that only enculturation correlated significantly with academic satisfaction. They also found that in a hierarchical multiple regression, the addition of enculturation and acculturation did not explain a significant amount of variance in academic satisfaction over and above a model excluding the two factors.

Ojeda et al. (2011) also included enculturation and acculturation as predictors of academic satisfaction in their study of Mexican American college students. Unlike Hui et al. (2013), they found that only acculturation significantly predicted academic satisfaction. They also found that acculturation significantly predicted academic self-efficacy, outcome expectations, and goal progress, while enculturation only correlated significantly with academic self-efficacy (Ojeda et al., 2011). Finally, Sheu et al. (2011) examined the relation of self-construal, or one's view of the self in relation to others, to academic satisfaction in Taiwanese college students. Their results revealed that interdependent self-construal predicted academic stress but not academic satisfaction (Sheu et al., 2011).

To build on these studies, the present study will include the cultural variable, self-construal, in the SCCT satisfaction model to examine the role of cultural variables relative to academic satisfaction. Self-construal has been shown to predict a number of indicators of psychological and emotional functioning (e.g. coping, stress, distress, life

satisfaction) (Cheng et al., 2011; Christopher, D'Souza, Peraza, & Dhaliwal, 2010; Kwan, Bond, & Singelis, 1997). This study will assess the usefulness of self-construal in predicting the academic satisfaction of African students.

Bringing It All Together

In sum, academic satisfaction is an important part of a positive college experience and understanding it within the context of different student populations is important. The aim of this study is to study academic satisfaction in African students attending U.S. universities using the SCCT satisfaction model. Select sociocognitive, environmental, cultural, and satisfaction variables will be considered under the framework of the SCCT satisfaction model. The study will also examine how self-construal, a cultural variable, is linked to the social cognitive predictors of academic satisfaction. Efforts to understand the academic well-being of African students in the US have important implications for counseling psychology's emphasis on multicultural competence and its oft-stated goal of understanding within-group variations.

CHAPTER 2: LITERATURE REVIEW

The academic satisfaction of students in U.S. universities and colleges is an important factor in positive college adjustment (Gerdes & Mallinkrodt, 1994). African students, as a subpopulation of students in U.S. universities and colleges, represent one of many sub-populations whose complex cultural adjustment narratives interplays with their academic satisfaction (Awokoya & Harushimana, 2011).

The following review will first present a brief exposition on the characteristics and history of African students in the US and then consider their academic satisfaction and adjustment, highlighting the psychosocial consequences of being an African student in U.S. schools. Second, the review will discuss Social Cognitive Career Theory (SCCT), presenting the critical variables and relationships that will be studied in this thesis. Finally, the role of culture in predicting psychological adjustment will be considered. In particular, I will introduce the concept of self-construal and review its utility as a predictor of cultural differences in satisfaction.

Academic Adjustment of African Students in the US

African students, those born in Africa (1st and 1.5 generation) and those born in the US to African parents (2nd generation), who attend universities in the US have the unique experience of coordinating dual identities as American students and African individuals. How this dichotomy manifests in the academic setting has implications for the adjustment and well-being of African students. A keen understanding of these implications begins with an appreciation for the particular characteristics of this population.

Characteristics of African students in the US. While “Africa ... [is] home to a range of subjectivities” (Dawes, 1998, p. 8) and “a Nigerian is much different from a

Tanzanian and a Arab African is different from a white African...” Abdi (1975, p. 231), Africa shares a “cultural unity” and “certain common quality” as a result of her histories of slavery and colonization (Nsamenang, 2007, p. 1). Furthermore, all 1st, 1.5, and 2nd generation African students, regardless of country of origin, share a similar struggle of trying to navigate the complexities of the myriad of sociocultural, environmental, and physiological adjustments that come with being both Black and foreign in the US (Chen, 1999; Constantine, Anderson, Berkel, Caldwell, & Utsey, 2005).

In addition, African students share the experience of being divergent from multi-generational Black students in several important ways. Children of African immigrants are more likely than their Black American peers to come from two-parent homes, live in more integrated communities, and achieve higher socioeconomic status (Massey et al., 2007). Some researchers have attributed this difference to the “emphasis on respect for authority and family solidarity characteristic of immigrant families, along with their status as voluntary minorities, [which] encourages a positive outlook toward education and social mobility” (Massey et al., 2007, p. 245). Awokoya and Harushimana (2011) wrote that African students are often seen by their Black American peers as primitive, backwards, or at the other extreme, “acting white.” African students in their study reported feeling isolated and marginalized in their relationships with their Black American peers. Hence, aggregating the academic experiences of all U.S. native and non-native Black students may overlook the influence of the latter group’s distinct sociocultural experiences on their satisfaction and adjustment.

Thus, it is not inappropriate to look at African students as a singular and distinct subpopulation of students, despite differences in ethnic origins. Furthermore, looking at

African students apart from their Black American peers also allows for closer inspection of their unique academic experiences. The following offers a brief overview of values and norms that are shared by students of African origin which help to shape their adjustment experiences.

Cultural values and norms. African students come from “high-context” cultures, meaning norms and customs are contextually derived rather than explicitly stated (Francis, 2000; Stebleton, 2010). In effect, African students learn much about their roles and expectations in the family and community implicitly, rather than explicitly. Students learn that they are the “carriers of the future, the disseminators of cultural values, and economic insurance for their aged parents” (Francis, 2000, p. 152). This expectation carries great weight and students learn to see their actions as directly responsible for the well-being and security of their family. Furthermore, as the familial structure in Africa emphasizes the extended family over the nuclear family and the family may include relatives over several generations and across several lines (Francis, 2000), African students may view their behavior as not simply having consequences for their immediate family but for their extended community of kinsmen.

Within the African community a lot of weight is placed on authority and age, and young Africans are instructed from very early on that they must demonstrate respect for any elder regardless of their relation to the child (Amayo, 2007; Francis, 2000). Related to this, young Africans learn not to volunteer their thoughts unsolicited or to dispute their elders (Amayo, 2007). As a result, expressing dissent or opposition to the wills or desires of one’s elders in the African community is eschewed and so in the context of one’s education, African students may be less likely to express a preference or opinion for an

academic program or major if it would conflict with that of their parents or a significant elder (Amayo, 2007).

In fact, educational achievement in the African community is seen less as a self-governed objective and more as a responsibility of the individual to his or her community (Amayo, 2007). This attitude stems from the communally-held belief that academic achievements not only yield increased economic and social opportunities for the family, but that to underperform academically is a sign of laziness and disgrace to one's family and village (Amayo, 2007; Ogbaa, 2003).

Given the salience of these cultural values to African students, differences between the customs of the US and the tenets of their home country may place many African students in a struggle between the push and pull of acculturation, "the degree to which a person adheres to the cultural norms of the dominant society," (Kim, Atkinson, & Umemoto, 2001, p. 579) and enculturation, "the process of retaining the cultural norms of one's indigenous culture" (Kim et al., 2001, p. 579). Especially when the values espoused outside of the home conflict with those espoused at home, the cultural adjustment process can have negative effects on the well-being and satisfaction of African students. A closer look at the cross-cultural adjustment experience of African students and its impact on students' psychological functioning is therefore warranted.

Cross-cultural adjustment. For new Americans, or individuals with recent histories in the US, Chen (1999) noted that the process of adaptation could lead to feelings of "loss, loneliness, helplessness, and depression" (p. 49). Some challenges of adjustment include issues with intergenerational conflict, limited language proficiency, and unfamiliarity with the norms of the new environment (Awokoya & Harushimana,

2011; Constantine et al., 2005; Ogbaa, 2003). Ette (2012) summarized the findings from several studies, which revealed that among African students born abroad, the loss of their immediate communities was related to depression for some of these students.

Other sources of stress for African students came from the need to balance the more liberal, individualistic expectations of U.S. society with the values of their cultural communities regarding the structure of family, the role of women, and the expectations of children (Ette, 2012). Also, the history of race and the politics of immigration in the US required African students to navigate the tangle of racial identities and cultural perceptions others placed on them as Blacks and foreigners (Ette, 2012). Relatedly, African students also did not anticipate barriers to their career aspirations in the US due to racism and/or xenophobia.

For 1.5 and 2nd generation African students, conflicts of culture between the students and their parents yielded psychological distress for the students (Awokoya & Harushimana, 2011). In a qualitative study that explored the acculturation and identity development of Nigerian students, Awokoya and Harushimana (2011) described the experience of 1.5 and 2nd generation children caught between their parents' more traditional, restrictive world and the world they saw outside their homes, which valued the self and uninhibited expression. Many risked being reprimanded if they eschewed the values of their upbringing but also risked being ostracized by their peers if they did not. The adjustment of these bicultural African youth was further jeopardized when they found themselves grouped with other Black Americans. They became socialized to adopt the attitudes and behaviors of their non-African peers, which further endangered their African identity (Awokoya & Harushimana, 2011).

The university setting may offer a particular quagmire of norms, expectations, and values that require navigation. Therefore, while the cross-cultural adjustment process may influence African students' general well-being and psychological functioning, it may also have a pronounced effect on African students' academic well-being and adjustment. The following section explores this more closely.

Academic satisfaction. Academic satisfaction, which refers to the pleasurable or positive emotional state resulting from the appraisal of one's role or experiences as a student (Lent & Brown, 2006), is an important construct as it relates to the lives of college students. There are significant social, psychological, intellectual, and economic processes and outcomes associated with going to college (Pascarella & Terenzini, 1991). College represents a time when many students are away from their families for the first time, meet and relate with individuals from a diversity of backgrounds, and begin fashioning a self-system comprised of their political, religious, social, occupational, and intellectual values and attitudes (Pascarella & Terenzini, 1991). For this reason understanding satisfaction with one's academic experience is a critical endeavor.

The exploration of the construct within specific subpopulations of students is needed to understand how academic satisfaction may manifest differently among these groups or if additional factors are necessary for conceptualizing academic satisfaction within these groups. African students represent one subpopulation of university students for whom academic satisfaction is an important consideration. African students are enrolling in U.S. universities and colleges at an increasing rate, yet little is known about their college experience, the extent to which they are satisfied with it, and which factors contribute to their experience of satisfaction and adjustment.

U.S. university and college campuses boast a range of people and cultures with whom African students must engage (Awokoya & Harushimana, 2011). From administrators to faculty to other students, African students must learn the social expectations required to successfully navigate U.S. college life. Ette (2012) reported that 1st generation African students had social difficulties in the academic environment. They recounted one story of a professor insulting the student's desire for good grades and another story about fellow students avoiding seats adjacent to the student (Ette, 2012).

Awokoya and Harushimana (2011) found that, among 1.5 and 2nd generation Africans, instructors often drew distinctions between them and their Black American peers by referring to them as “good Black students” (p. 229). Placing these students on the “model minority” pedestal led to feelings of embarrassment and tension with their non-African peers. Awokoya and Harushimana (2011) reported that their participants had relatively few adaptive coping skills for dealing with these demands. They added that research offering “effective interventions aimed to address the social and educational adjustment of 1.5 and 2nd generation adolescent African immigrants [was] scant” (p. 230).

In addition to navigating the various expectations and assumptions of non-Africans, African students are presented with many circumstances and situations within the academic setting that can result in challenges for them. Familiarity with different scholastic milestones (e.g., declaring a major), university resources (e.g., the financial aid office, counseling center), and academic values (e.g., students are encouraged to be critical) facilitate the successful adjustment to and progression through college for any new student. However, without this knowledge, an African student's college-going

experience faces stumbling blocks.

Ette (2012) discovered that some African immigrant students found the U.S. educational system confusing, overwhelming, and made more complicated by the “machines that assume the individual is able to speak English well” (p. 131). The present author recently talked to one African student who, being unfamiliar with the college-going process in the US, began taking courses at a community college shortly after his arrival because “that’s what you do back home if you’re not working”. He took courses for years, unaware that the courses could count towards a degree, until eventually an academic advisor informed him that he had more than enough credits for two Associate’s degrees. The student expressed frustration that had he known when he arrived how the educational system worked in the US, he would have pursued his Bachelor’s degree years earlier. In recognition of the dilemma such lack of familiarity may create for African students, Goyol (2006) dedicated a chapter of his text to explaining to new African students oft-taken for granted aspects of being a student in the US, such as housing and classroom etiquette.

The preceding sections demonstrate that African students are a distinct group of students whose academic adjustment is nuanced and complicated by their cross-cultural adjustment. Unfortunately, critical understanding and practical interventions for supporting the academic adjustment and satisfaction of African students in the US is limited. It is therefore important to determine the applicability of current theories of academic well-being in comprehending the factors relevant for supporting the healthy adjustment of U.S.-based African students.

Social Cognitive Career Theory (SCCT)

Lent et al. (1994) developed SCCT, which posited a series of three models that focused on three overlapping but distinct developmental segments: career interest, career choice, and career performance. The three models featured several interrelated constructs, including the primary constructs of self-efficacy, outcome expectations, and goals (Lent et al., 1994). Though it represented their efforts to unify the competing theories of career development existing at the time, in reference to the principles underlying SCCT, Lent et al. (1994) acknowledged that SCCT was rooted in the social cognitive framework, “which emphasized the role of self-referent thinking in guiding human motivation and behavior” (p. 81). The following is a brief look at the theoretical origins of SCCT.

Theoretical background. In response to trends at the time in psychoanalytic and behaviorist theory, Julian Rotter (1954) developed *social learning theory*. Rotter’s social learning theory asserted that individuals’ desires and expectations for certain outcomes would motivate their behaviors (Rotter, 1954). In 1986, Albert Bandura, building on the work of Rotter, proposed *social cognitive theory* (Fouad & Guillen, 2006). Like social learning theory, it recognized the importance of environment in influencing behavior. Social cognitive theory defined a relationship known as *triadic reciprocity* among three variables: cognitions, behaviors, and environment (Lent et al., 1994). This relationship presumed that the variables acted reciprocally on one another. Furthermore, social cognitive theory assumed that individuals learned behaviors by observing models in their environment and repeating behaviors that were deemed to be rewarding (Bandura, 1986; Lent et al., 1994).

A Unifying Perspective on Well-Being

In 2004, Lent presented the fourth model in the series, a model of satisfaction predicated on the original SCCT models. Research exploring well-being and its related constructs, such as domain and overall life satisfaction, goes back over 80 years (Lent, 2004). This cornucopia of research has produced a number of theoretically distinct approaches to defining and organizing the concept of well-being. Three relevant perspectives include the philosophical roots of well-being (eudaimonic versus hedonic well-being), the focus on subjective versus psychological well-being, and conceptions of the source of well-being (i.e., top-down versus bottom-up processing) (Lent, 2004). To better understand well-being and satisfaction, the model offered an integrative theoretical framework that combined features of hedonic and eudaimonic well-being, subjective and psychological well-being, and the bottom-up and top-down perspectives (Lent, 2004).

Eudaimonic and hedonic well-being. There are at least two distinct traditions in the understanding of well-being. The hedonic tradition holds that well-being is about the experience of pleasure and happiness. In this view, the study of well-being should focus on the pleasant feelings or presence of positive and absence of negative affect in an individual's life (Lent, 2004). On the other hand, adherents of the eudaimonic view of well-being have maintained that well-being involves more than happiness; it is about the realization of one's greatest potential, the experience of self-actualization. Therefore, the focus for eudaimonic well-being is on what the individual is doing rather than how he or she is feeling (Lent, 2004).

Subjective and psychological well-being. Building on these philosophies, researchers have offered two different psychological definitions of well-being. Subjective

well-being is a three-part concept consisting of life satisfaction, negative affect, and positive affect. It is most closely related to the hedonic view of well-being and essentially emphasizes the subjective, emotional experience of well-being (Lent, 2004).

Psychological well-being draws from work in mental health, clinical, and life span development (Lent, 2004). Essentially, it emphasizes six aspects of positive psychological functioning that reflect an individual's success in reaching his or her most actualized self: autonomy, personal growth, self-acceptance, purpose in life, environmental mastery, and positive relations with others. Psychological well-being is most clearly aligned with eudaimonic well-being.

Top-down and bottom-up processing. González, Coenders, Saez, and Casas (2010) summarized current thinking on the bottom-up and top-down processing of satisfaction. They explained that in bottom-up processing “satisfaction with specific domains leads to satisfaction with life as a whole” and in top-down processing “satisfaction with life as a whole would influence satisfaction with specific life domains” (González et al., 2010, p. 336). They noted that many researchers “have accepted the gestalt principle that satisfaction with life as a whole is something more than the sum of its parts, that is to say satisfaction with different domains in life” (p. 336).

An alternative interpretation of top-down and bottom-up processing in the subjective well-being literature presents top-down processing as the influence of one's personality, which is considered a set of global, stable traits, on his or her satisfaction (Feist, Bodner, Jacobs, Miles, & Tan, 1995; Heller, Watson, & Ilies, 2004). Bottom-up processing is understood as the effect on satisfaction that results from the situations, events, and circumstances of one's life (Feist et al., 1995; Heller et al., 2004).

Albeit intertwined with social cognitive theories, the SCCT model of satisfaction also draws on these other theoretical approaches. The model unifies these varying, yet related perspectives to reflect the complex interplay among contextual and person factors in satisfaction and adjustment.

SCCT Model of Satisfaction

Like the first three models, this fourth segmental model integrated self-efficacy, outcome expectations, and goal progress as key predictors of the model (Lent, 2004). In the model of satisfaction these predictors are theorized to relate to satisfaction with life overall and in particular life domains, such as the academic domains (Figure 1).

Self-efficacy refers to one's confidence in his or her ability to execute particular behaviors or courses of action. Citing Bandura (1989), Lent et al. (1994) stated that self-efficacy was "the most central and pervasive mechanism of personal agency" (p. 83). Research has also found that self-efficacy is predictive of academic and career performance (Lent et al. 1994). Self-efficacy is not considered synonymous with an objective appraisal of one's skills; rather it is a dynamic, domain-specific assessment of one's capacity to perform in a particular area.

Outcome expectations involve individuals' perception of the consequences of pursuing a specific course of action. Specifically, outcome expectations are "the subjective probability that certain acts [would] produce particular outcomes, together with the value one places on those outcomes" (Lent et al., 1994, p. 84). Essentially, one's interests, choices, and performance are partly linked to the anticipated outcomes one feels would result from his or her behavior. Lent et al. (1994) recognized that outcome expectations and self-efficacy could affect individual behavior differentially and hold

different weights in different contexts. One example they gave was a person who values an outcome but does not pursue it either because of doubts about his or her ability (i.e., self-efficacy is the dominant motivator) or because he or she wants to avoid upsetting his or her family (i.e., outcome expectations is the dominant motivator) (Lent et al., 1994).

Goals are also an essential concept within SCCT. Goals offer individuals a way to direct their actions towards obtaining personally satisfying experiences (Lent et al., 1994). The authors highlighted that people do not simply act in response to their environment; people are agentic and set goals in efforts to shape their environment. In this way, goals are related to outcome expectations in that they reflect individuals' "capacity to symbolically represent desired future outcomes" (Lent et al., 1994, p. 85). Goals are also associated with self-efficacy. In particular, the goals that people pursue are partly based on their perceived capacity to perform the behaviors necessary to achieve these goals. These three primary variables of SCCT (i.e., self-efficacy, outcome expectations, goals) were theorized, along with a variety of other person, contextual, and experiential variables, to help explain how career-related interests are developed, choices are made, and performance attainments are accomplished.

In support of his theory, Lent (2004) presented a synthesis of research that indicated that a central part of hedonic and eudaimonic well-being was making progress towards one's goals, and in turn goal progress was partly determined by one's feelings of efficacy and sense of outcome expectations.

In addition to the three primary sociocognitive variables, the satisfaction model incorporated personality traits, affective dispositions, and contextual variables (Figure 1). Research has shown that one's genetic predispositions, personality, and dispositional

states were tied to appraisal of his or her life and domain satisfaction (Lent, 2004). In other words, individuals could be generally happy or unhappy based on genetic influences that occur before birth or personality traits cultivated early in life.

The environmental component of the person-behavior-environment interaction was operationalized in the satisfaction model as environmental supports and resources. Lent (2004) explained that the positive effects of social support were crucial in facilitating well-being (Lent, 2004). Specifically, in difficult situations, social support could be a source of coping self-efficacy. Modalities of social support could include material resources, emotional support, positive feedback, and encouragement.

Domain satisfaction. A central component of the SCCT normative well-being model is the relationship between domain satisfaction and life satisfaction. Studies examining domain satisfaction have suggested that life satisfaction can be broken down into several life domains (Cummins, 1996) and that the relationship between life satisfaction and domain satisfaction, while bidirectional and simultaneous, is not a linear function (i.e., overall life satisfaction does not equal the sum of satisfaction with individual life domains) (González et al., 2010). The model of normative well-being incorporates this reciprocal relationship between life satisfaction and domain satisfaction (Lent, 2004). That is, satisfaction in a particular life domain (e.g. academic domain) can influence one's global life satisfaction and, satisfaction with life overall can affect satisfaction in specific life domains (González et al., 2010; Lent, 2004).

This study is concerned with academic domain satisfaction. Lent and Brown (2008) described academic satisfaction as the positive emotion experienced when appraising one's academic conditions. Essentially, academic satisfaction reflects how

much individuals liked their academic experience or environment. They noted that appraisals of academic satisfaction could be global (i.e., how well one likes his or her academic major in general) or faceted (i.e., how well one likes a particular facet of his or her academic major, such as his or her major's department). In the model, academic satisfaction is measured over a non-specific period of time (i.e. "most of the time"). However, Lent and Brown (2008) added that the model could be adapted to measure academic satisfaction over a specific temporal interval.

Lent (2004) offered two variants of the satisfaction model, one focused on normative well-being model and the other on restorative well-being processes. The former model integrated all the elements of the satisfaction model and explained individuals' characteristic levels of optimal functioning. The latter model explained the factors through which well-being could be restored after exposure to distressing life experiences. The present study is based on the normative model because of it focuses on factors that foster academic satisfaction under typical (i.e., non-traumatic) life conditions.

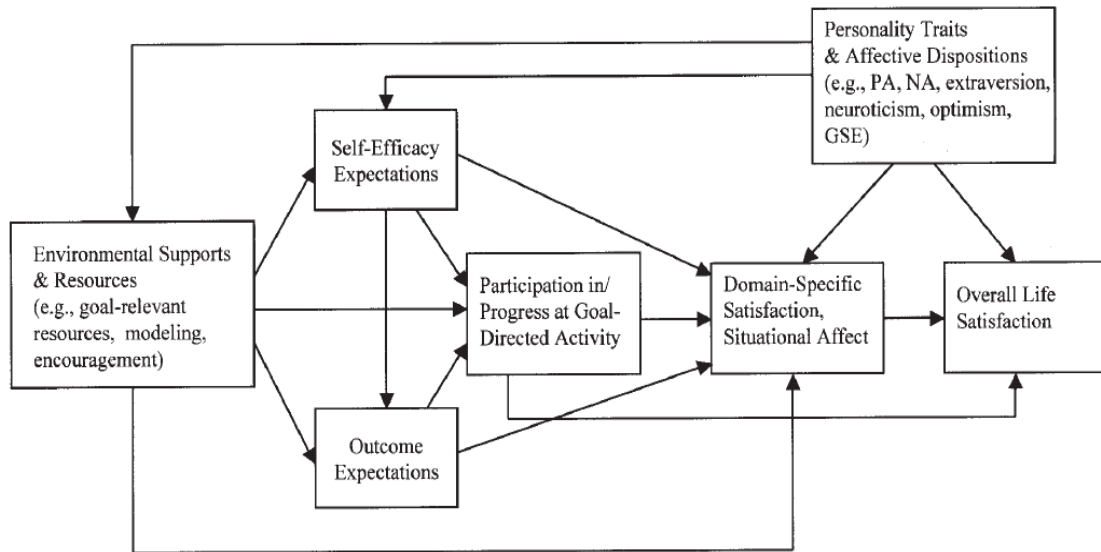


Figure 1. Social Cognitive Model of Normative Well-Being. From Lent, R. W. (2004).

Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment. *Journal of Counseling Psychology*, 51(4), 482-509.

Social Cognitive Variables in African Students' Academic Satisfaction

The experience of Africans living in the US is replete with stories of adjustment challenges. SCCT provides a theoretical structure for examining the relevance of certain factors theorized to promote well-being and positive adjustment. This section considers the relevance of social cognitive factors to Africans.

Self-efficacy. In his review of the literature on well-being, Lent (2004) concluded that self-efficacy plays an important role in regulating one's affective state. The feelings associated with competency and confidence with one's abilities to perform tasks related to valued goals was also seen as integral to well-being. To date, no studies have examined self-efficacy in relation to the well-being of African students in the US. However, the results of one study examining the relation of academic domain self-efficacy to academic achievement suggest that academic self-efficacy could be relevant to well-being. Using a sample of African middle school students, Tella, Tella, and Adeniyi (2009) tested a predictive model of academic achievement with locus of control, self-efficacy, and causal attribution as the independent variables. They found that African students' perceptions of their capacity to perform specific academic tasks were significantly and positively correlated with their academic achievement. To the extent that one would expect academic achievement to be positively related to academic satisfaction, it would not be unreasonable to hypothesize that academic self-efficacy would be related to academic satisfaction as well in U.S.-based African students. The linkage of self-efficacy to goals can also be inferred from a study in which the chess-playing self-efficacy beliefs of African university chess players were found to relate significantly to their chess-playing goal commitment (Okurame, 2006).

Outcome expectations. Satisfaction can be seen as partly a function of one's

expectations about the positive outcomes that would result from pursuing a valued goal or activity. Lent (2004) summarized research that supported the relationship between outcome expectations and well-being. The earlier discussion on African cultural values revealed that Africans have many positive expectations about the outcomes associated with pursuing higher education, including making one's family proud; securing one's family and one's own financial stability; and elevating one's family's social standing (Amayo, 2007; Ogbaa, 2003). Their expectations about the positive outcomes that would result from pursuing a U.S. education are likely to influence their enjoyment of their academic experiences. Thus, one African participant in the Constantine et al. (2005) study commented that the "...[U.S. educational] system is among the best in the world" and for this reason he stated "I enjoy [studying] here" (p. 60).

Social support. A common denominator in the literature on the adjustment experiences of African students is the emphasis on social support. Constantine et al. (2005) found that African immigrant students reported that social support from family was essential to their adjustment. Chen (1999), Idowu (1985), and Ette (2012) discussed the significance of social support for immigrants and the negative implications that loss of support might have for the well-being and adjustment experiences of Africans. In a qualitative study, Obeng (2008) noted that parental support appeared to be linked to high academic achievement among African students. Awokoya and Harushimana (2011) cited research findings indicating that "positive mental well-being among young (or 1.5) immigrants is a function of...social support" (p. 215). The positive relationship between social support and academic satisfaction as theorized by the social cognitive model is consistent with prior findings regarding the importance of social support in the academic

lives of African students.

Goal progress. Lent (2004) explained that goals may promote one's sense of satisfaction by triggering positive emotions in response to his or her perceived progress on a valued goal. Summarizing research that had examined the relationship between goals and well-being, Lent (2004) concluded that goals were reliable predictors of well-being and that perceptions of progress on a goal might be more rewarding than the end-state of reaching the goal. Lent also observed that "commitment to personal goals is most likely to facilitate well-being when the individual's goals are valued by his or her culture" (p. 495). Earlier in the review on African cultural values, I discussed the importance of educational attainment for Africans (Awokoya & Harushimana, 2011; Obeng, 2008). It follows that the value placed on academic success in African culture may translate to feelings of satisfaction among African students making progress on their academic goals.

Personality traits and dispositions. Personality traits may shape or bias one's perceptions of one's self-efficacy, as well as one's beliefs about available supports and resources (Lent, 2004). One's personality also influences one's tendency to be satisfied with life in general and in specific domains (Lent, 2004). The role of personality and disposition in relation to other factors in the model (e.g., supports, domain satisfaction) is assumed to be consistent in an African sample. Salami (2010) studied stress and well-being and discovered that trait emotional intelligence and negative affectivity predicted well-being and stress in a sample of 420 high school teachers in Nigeria.

The factors of the SCCT satisfaction model were shown in the preceding sections to conceptually relate to academic satisfaction in African students. A test of the model using African students would allow for the relationships among these factors and

academic satisfaction to be examined jointly and empirically. Previous studies, which have tested the model and yielded empirical support for its utility, are reviewed in the following section.

Empirical Validation of the SCCT Model of Satisfaction

Since the introduction of the normative well-being model, several studies have been conducted to test its empirical validity. Lent et al. (2005) tested the model with a sample of 177 undergraduate students and found evidence of good model-data fit. Using structural equation modeling (Tabachnick & Fidell, 2007), they examined the direct and indirect effects of the various factors of the model and found that the direct effects of support, self-efficacy, and goal progress on academic satisfaction were each significant. They also found significant direct effects of self-efficacy and supports on goal progress. They did not, however, find a significant direct effect of outcome expectations on either goal progress or academic satisfaction.

Using a sample of 153 engineering students, Lent et al. (2007) extended the findings of the Lent et al. (2005) study to students in a specific academic environment (engineering). Their results revealed significant correlations of the predictors (i.e., self-efficacy, outcome expectations, environmental supports, and goal progress) with each other and with the criterion variable (academic satisfaction) (Lent et al., 2007). The variance in academic satisfaction explained by the full model was substantial ($R^2 = .68$). The authors also used structural equation modeling to test the overall fit of the model to the data and found good overall fit. Several paths of the model yielded significant direct effects. The authors found significant direct effects of self-efficacy to goal progress and academic satisfaction. The direct effects of environmental supports to goal progress and

academic satisfaction were also significant. Finally, goal progress had a significant direct effect to academic satisfaction. Theory consistent results were not found, however, for outcome expectations. A trimmed model without outcome expectations was tested and the model fit indices were comparable to that of the full model (Lent et al., 2007).

Support was also found for the model in a 2009 study by Duffy and Lent that tested the model in the domain of job satisfaction. With a sample of 366 employed teachers, they hypothesized that the five predictors of their model (positive affect, work-related self-efficacy, work conditions, goal progress, and goal support) would have significant direct paths to work satisfaction. The authors found that the model fit the data well overall, although only positive affect, self-efficacy, and work conditions produced significant direct effects to work satisfaction. The variance explained by the full model was substantial ($R^2 = .75$), even though goal support and goal progress did not explain unique variance in work satisfaction (Duffy & Lent, 2009).

Lent et al. (2011) replicated the Duffy and Lent (2009) study with a sample of 235 Italian middle and high school teachers. Similar to the Duffy and Lent (2009) study, Lent et al. (2011) found good fit of the model to the data, and positive affect and work conditions produced significant direct effects to work satisfaction, while goal progress did not. Goal progress was shown to have a significant direct effect to life satisfaction (the latter dependent variable was not included in the Duffy and Lent [2009] study). Unlike the Duffy and Lent (2009) study, the direct path between self-efficacy and work satisfaction was not significant, whereas the direct path from efficacy supports to work conditions was significant. The overall model explained a large amount of variance in work satisfaction ($R^2 = .41$) and life satisfaction ($R^2 = .24$) (Lent et al., 2011).

In 2009, Lent et al. conducted another test of the model, this time using a longitudinal design. As previous tests of the satisfaction model had employed exclusively cross-sectional designs, Lent et al. (2009) set out to explore the temporal ordering of the factors as theorized in the model. Using a sample of 252 Portuguese undergraduate students, the authors also expanded on previous studies by looking at academic stress and perceived functioning along with academic satisfaction (Lent et al., 2009). Three models were tested in their study: a base model, which examined only the autoregressive paths among the T_1 and T_2 variables (e.g., the relation of T_1 positive affect to T_2 positive affect) over a 15 week interval (outcome expectations were not examined in this study); a bidirectional model, which tested paths between the variables at T_1 and the variables they were theorized to predict at T_2 , along with four reciprocal paths (between T_1 goal progress and T_2 self-efficacy, T_1 life satisfaction and T_2 adjustment, T_1 self-efficacy and T_2 positive affect, and T_1 environmental supports and T_2 positive affect); and finally, a unidirectional model, which mirrored the bidirectional model but without the reciprocal paths (Lent et al., 2009).

The researchers found good model fit indices for all three models (Lent et al., 2009). Specifically, they found that the unidirectional model was a better fit to the data than the base model and the bidirectional model was a better fit to the data than both the base and unidirectional models (Lent et al., 2009). In the bidirectional model the authors found generally significant paths between the predictor variables at T_1 and T_2 , with the exception of the paths between T_1 positive affect to T_2 environmental supports, adjustment, and life satisfaction and between T_1 goal progress to T_2 adjustment and life satisfaction, suggesting that positive affect and goal progress did not add significant

unique contributions to the variance in academic adjustment and life satisfaction (Lent et al., 2009).

A second longitudinal study conducted by Singley et al. (2010) tested the satisfaction model with a sample of 769 U.S. participants from a Mid-Atlantic university. The researchers tested a model with 6 factors: goal self-efficacy, goal progress, goal supports, positive affect, academic satisfaction, and life satisfaction; outcome expectations were not studied (Singley et al., 2010). The full model, which tested the direct effects of the predictors from T₁ to eight weeks later at T₂, as well as several cross-lagged paths between self-efficacy and goal progress and between academic satisfaction and life satisfaction, achieved good fit to the data. The full model also proved a better fit to the data than a model omitting the bidirectional path between self-efficacy and goal progress (i.e., T₁ self-efficacy to T₂ goal progress and T₁ goal progress to T₂ self-efficacy). Another model with the bidirectional path between academic satisfaction and life satisfaction removed did not differ significantly from the full model in its model fit. Contrary to the Lent et al. (2009) study, Singley et al. (2010) found that T₁ goal progress was a significant predictor of T₂ academic satisfaction and T₁ self-efficacy was not.

Ojeda et al. (2011) used the model to study academic satisfaction in Mexican Americans. In a sample of 457 Mexican American college students, Ojeda et al. (2011) tested a modified version of the SCCT satisfaction model in which ratings of enculturation and acculturation were substituted for social support. Similar to Lent et al. (2005), Ojeda et al. (2011) found theory-consistent relations among self-efficacy, outcome expectations, goals, and academic satisfaction, with the overall model yielding

adequate fit to the data. The overall model explained a significant proportion of variance in academic satisfaction ($R^2 = .38$) and life satisfaction ($R^2 = .14$) (Ojeda et al., 2011). Self-efficacy and outcome expectations both produced direct effects to academic goal progress. The relation of self-efficacy to academic satisfaction was found to be largely indirect (through goal progress). Outcome expectations, however, had a significant direct effect on academic satisfaction. The direct effect of goal progress on academic satisfaction was also significant (Ojeda et al., 2011).

Hui et al. (2013) adapted the model in another cross-cultural test. Like Ojeda et al. (2011), they looked at the direct and indirect effects of acculturation and enculturation on academic satisfaction in a sample of 122 Asian American college students. They tested the direct and indirect effects of the model using structural equation modeling and found that acculturation and enculturation had significant indirect effects to academic satisfaction via social support. Also, social support and goal progress, but not self-efficacy, produced significant direct paths to academic satisfaction. Self-efficacy had a significant indirect effect via goal progress to academic satisfaction (outcome expectations were not included in this study) (Hui et al., 2013). Finally, in a recent study testing the SCCT satisfaction model in Portuguese college students, Lent, Taveira, and Lobo (2012) found that all of the relationships theorized among the social cognitive factors of the model had significant direct paths to academic satisfaction, with the exception of goal progress.

The various tests of the SCCT satisfaction model have offered new insight about the model overall, its individual paths, and its usefulness in diverse populations. Overall the model yielded adequate fit to the data in all studies that conducted path analysis.

However, the direct effect from supports to self-efficacy was found to be nonsignificant in five of the studies reviewed herein (Duffy et al., 2009; Lent et al., 2005; Lent et al., 2011; Ojeda et al., 2011; Singley et al., 2010) while the direct effect from supports to satisfaction was found to be nonsignificant in two studies (Duffy et al., 2009; Ojeda et al., 2011). Outcome expectations had nonsignificant direct effects to satisfaction in two studies (Lent et al., 2005; Lent et al., 2007) and to goal progress in three studies (Lent et al., 2005; Lent et al., 2007; Ojeda et al., 2011). As a result of these findings, some researchers have omitted outcome expectations from their tests of the model (Hui et al., 2013; Lent et al., 2007; Lent et al., 2012; Singley et al., 2010). Finally, the direct effect from self-efficacy to satisfaction was not significant in four studies (Hui et al., 2013; Lent et al., 2011; Ojeda et al., 2011; Singley et al., 2010). The paths which have generally been significant across a majority of the studies reviewed were the paths from supports to outcome expectations, supports to goal progress, self-efficacy to outcome expectations, self-efficacy to goal progress, and goal progress to satisfaction (see Figure 2).

While this synthesis is useful for summarizing the findings reviewed above, basing hypotheses on this synthesis would be premature. There has been a relatively minimal corpus of studies looking at academic satisfaction using the SCCT model. A meta-analysis, should more research be done in this area, would provide a more robust synthesis of the overall effect sizes of specific paths in the model and provide a basis for more specific hypotheses. Furthermore, the unique characteristics of this study (e.g., use of a never before studied population, the addition of self-construal) suggest that it would be useful to tests the paths as postulated by the theory rather than as based on previous tests of the model.

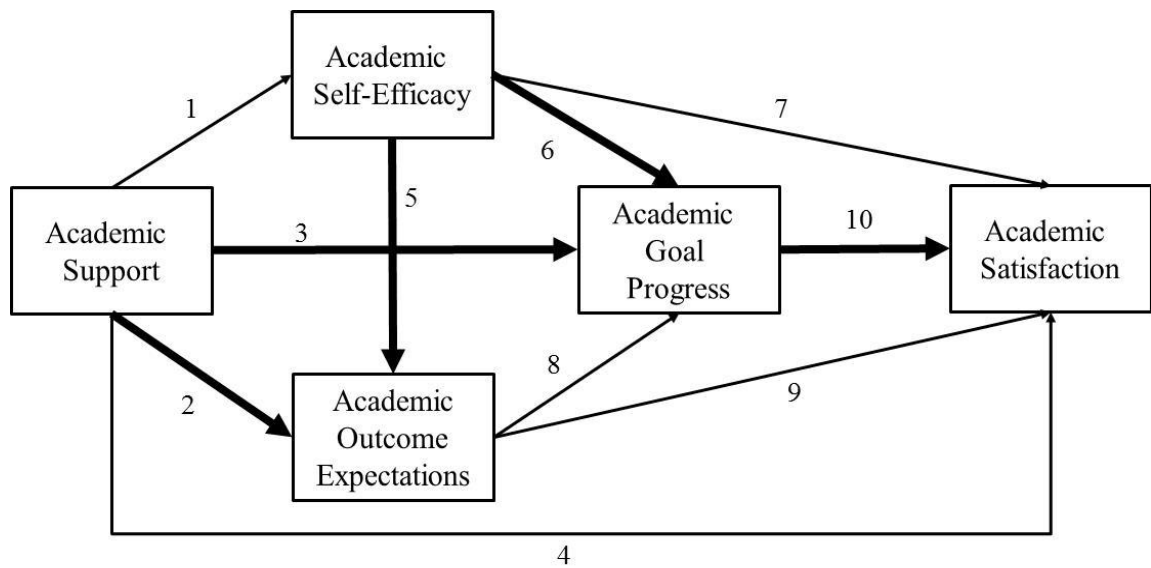


Figure 2. Significant Paths of the SCCT Satisfaction Model. Bolded paths are the direct effects that have generally been significant in path analytic tests of the model.

Taken together, studies have generally offered support for the model of academic and work satisfaction (if not for all of its individual paths) across a range of populations, both nationally (e.g., teachers, students, White Americans, Black Americans, Mexican-Americans) and internationally (e.g., Italians, Portuguese, Taiwanese). Thus, it is expected that this model will help to explain academic satisfaction in African college students. The present study hypothesized that all the paths would be significant and that the model would have adequate fit to the data.

The literature reviewed in the preceding sections suggests that there is both a conceptual and empirical basis for extending SCCT's satisfaction model to study the academic experiences of Africans. In addition to the social cognitive variables, it is possible that culture-specific factors may help to explain the academic satisfaction of African students in the US. The next sections of this review will concentrate on current insights on culture and well-being and present a synthesis of research related to the cultural variable of interest in this study.

Cultural Considerations in Well-Being

There has been increasing awareness that satisfaction and well-being may manifest somewhat differently across and within cultures. For example, Sheu and Lent (2008) noted that the relative importance placed on happiness differs by culture. Essentially, the pursuit of happiness had often been viewed as a Western, individualistic goal, and persons from more collectivistic communities might see the happiness of their families or communities as taking precedence over their personal happiness. These authors also argued that commonly assumed universal variables like personality traits might not be expressed similarly across cultures. Some variables could potentially have

more predictive power in one culture versus another. For example, they cited a study by Suh, Diener, Oishi, and Triandis (1998) that found that affective states were more predictive of life satisfaction for individuals from individualistic versus collectivistic nations. Sheu and Lent (2008) suggested that explicit inclusion of cultural variables in existing models of well-being might allow for a better understanding of how culture interacts with other person and environment variables to predict well-being.

The present study seeks not only to test the SCCT satisfaction model with African students but to integrate a construct that may account for the cultural orientation of Africans in the US and possibly better explain their satisfaction experience. The construct under study is self-construal. Extant research on self-construal suggests that it is a significant predictor of psychological wellness.

Self-construal. Self-construal was originally coined by Markus and Kitayama (1991) to explain individual cultural differences in one's views of the self and the self in relation to others. It has been conceptualized as a personality trait that shapes the cognition, emotions, motivations, and behaviors of individuals. They identified two construals of the self: an independent self and an interdependent self (Markus & Kitayama, 1991).

Highly independent individuals are characterized by a view of the self as an autonomous, contained entity (Christopher et al., 2010). Independently-construed people value individual uniqueness and self-expression and engage in behaviors that are guided by their internal cognitions, emotions, and goals (Christopher et al., 2010; Markus & Kitayama, 1991). Independent self-construals of the self are most likely to be present in persons from individualistic societies (Cross, 1995; Markus & Kitayama, 1991).

Highly interdependent individuals do not envision the self as a constant, wholly bound entity (Markus & Kitayama, 1991). Interdependently-construed individuals hold a view of the self that is defined by their relationships with others, thus, for them the self may change given the social context (Christopher et al., 2010; Markus & Kitayama, 1991). Interdependents try to anticipate the cognitions and emotions of others, fulfill the obligations, responsibilities, and expectations assigned to them, and value harmonious exchange in interpersonal relationships (Markus & Kitayama, 1991). Individuals from collectivistic societies are more likely to hold an interdependent view of the self (Cross, 1995; Markus and Kitayama, 1991).

Researchers have acknowledged that individuals high in independence and interdependence can be found in both collectivistic and individualistic cultures (Markus & Kitayama, 1991; Triandis, 1989; 1995). An individual can also be more highly interdependent or highly independent in varying contexts (Cross, 1995; Hollos & Leis, 2001; Triandis, 1989). For example, African students in the US straddle the line between the collectivistic values of their upbringing and the individualistic norms of the society in which they reside. They are often instructed to view their education as less a vehicle for self-expression or self-exploration and more as a means to fulfill familial and community expectations for accessing financial and social success (Amayo, 2007). For African students, parental input regarding acceptable academic choices carries much weight, while the traditional U.S. approach to education is to encourage students to pursue their interests and make choices that are self-guided (Christopher et al., 2010). Consequently, while in the academic setting, African students in the US may hold a view of the self that is both highly interdependent and independent.

Self-construal and psychological functioning. Theoretically, the view one has of him or herself as more interdependent or independent may shape his or her behaviors, cognitions, and emotions (Markus & Kitayama, 1991). Markus and Kitayama (1991) reviewed several studies that indicated that individuals high in interdependence tended to attribute behavior to situational reasons (versus dispositional reasons), experience shorter and less intense emotions, and be motivated by socially-oriented achievement (versus individually-oriented). Triandis (1995) also discussed differences in behavior and emotionality between individualists and collectivists. He noted that social context more than personality dictated behavior for collectivists and that individualists were more likely than collectivists to express their feelings openly (Triandis, 1995). He also cited research from Diener and his colleagues that showed collectivistic individuals reported lower ratings of subjective well-being and self-esteem compared to individualistic individuals (Triandis, 1995).

Researchers have built on this understanding of self-construal by exploring the connection between self-construal and psychological functioning. An early study by Cross (1995) provided support for the relationship between self-construal and coping and stress. Using a sample of 79 and 71 U.S. and East Asian graduate students, respectively, Cross (1995) examined the relationship of independent and interdependent self-construals to coping and stress. She found that although the two groups did not differ in their independent self-construals, the East Asian students had significantly higher ratings of interdependence than the U.S. students (Cross, 1995). Cross also found that for the East Asian students interdependence predicted a positive relationship with coping, which predicted lower stress levels, whereas higher ratings of independence predicted higher

levels of stress. Self-construal did not predict stress or coping for the American students (Cross, 1995).

Cheng et al. (2011) expanded on previous work on self-construal by testing four models that predicted the relationship between self-construal and subjective well-being—the independence model (an independent self predicts well-being), interdependence model (an interdependent self predicts well-being), conflict model (neither an independent nor an interdependent self is enough to predict well-being), and integration model (an independent and an interdependent self work together to predict well-being). In a large international study with participants from four individualistic nations, three East Asian countries (to represent collectivistic countries undergoing social modernization, and thus a mix of construal profiles), and three African nations (to represent unchanged collectivistic countries with primarily interdependent inhabitants), Cheng et al. (2011) hypothesized that the independent model would predict the well-being of participants from the individualistic nations, the interdependent model would predict the well-being of individuals from the collectivistic nations, and the integration or conflict model would predict the well-being of individuals from the modernizing nations.

The results of their study largely confirmed their hypotheses. They found that the independence model provided a good fit to the data for participants from the individualistic nations and the interdependence model provided a good fit to the data for participants from the sub-Saharan African countries. For individuals from the East Asian countries, the integration model was a better fit to the data than the conflict model. The researchers concluded that self-construal was a significant predictor of subjective well-being (Cheng et al., 2011).

In two related studies, Suh, Diener, and Updegraff (2008) determined that differences in self-construal were associated with differences in life satisfaction. In their first study, the authors administered measures of self-construal, social appraisal, emotionality, and life satisfaction in a sample of 101 European American university students. They hypothesized that independents would consider their emotions in evaluating their life satisfaction, while interdependents would consider their emotions *and* the approval of significant others (i.e., social appraisal) in their assessments of life satisfaction (Suh et al., 2008). Using regression analysis, Suh et al. (2008) found that for independent participants, the beta weight for emotionality was significant but the beta weight for social appraisal was not. Also consistent with their hypothesis, the researchers found that emotionality and social appraisal were both significant predictors of life satisfaction for interdependent participants (Suh et al., 2008).

In their second study, Suh et al. (2008) conducted a priming experiment with 77 U.S. students and 137 Korean students. Students from each country were randomly assigned to the independent or interdependent priming group. Their hypotheses were the same as in Study 1. The results revealed that when U.S. students were idiocentrically primed (i.e., asked to think about what makes them different from their family), others' view of their lives was not a significant predictor of the participants' life satisfaction. However, when they were relationally primed (i.e., asked to think about what they have in common with their family), both the participants' individual emotional experiences and their significant others' feelings about the participants' life predicted their life satisfaction. Among the Korean students, when primed to think about their unique selves, only emotion significantly predicted life satisfaction, as hypothesized. Contrary to

expectations, Suh et al. (2008) found that priming Korean students' relational selves resulted in no significant association between emotion and life satisfaction, and life satisfaction was significantly predicted by social appraisal alone.

Finally, self-construal has been studied in the context of SCCT (Sheu et al., 2011). Sheu et al. (2011) used a sample of 317 Taiwanese college students to study how the addition of self-construal to the SCCT satisfaction model would predict academic satisfaction. They found that ratings of interdependence were associated with greater social support, which in turn predicted academic satisfaction among the Taiwanese students.

Altogether, the findings of these studies (Cheng et al., 2011; Cross, 1995; Sheu et al., 2011; Suh et al., 2008) allude to the importance of self-construal in explaining satisfaction, well-being, and adjustment in various domains. These studies also highlight the importance of considering how self-construal is operationalized and measured. A brief review of current considerations in the measurement of self-construal is presented.

Measuring self-construal. There is consistent evidence suggesting that self-construal predicts satisfaction, well-being, and adjustment. However, there is debate about the best way to measure self-construal. Most prior research on self-construal has used Kuhn and McPartland's (1954) Twenty Statements Test (TST) or Likert-type scales such as Singelis's (1994) Self-Construal Scale (SCS); Gudykunst et al.'s (1996) measure of self-construal; and Kim and Leung's (1997) revised self-construal scale (R-SCS) (Harb & Smith, 2008; Levine et al., 2003). However, the adequacy of these measures has been questioned by a number of researchers (Harb & Smith, 2008; Levine et al., 2003). Of the Singelis (1994), Gudykunst et al. (1996), and Kim and Leung (1997) scales,

Levine et al. (2003) wrote "...the scales used to measure self-construals may be problematic.... Findings of heterogeneity in meta-analyses may signal problems with measurement validity..." (p. 230). Harb and Smith (2008) wrote that "both the TST and the Likert-type attitude item scales face serious conceptual and empirical challenges to their validity and reliability" (p. 179).

Although Singelis' (1994) scale has become one of the most, if not the most, used scale for assessing self-construal, a growing body of research suggests that self-construal is not a bidimensional construct. Such research suggests that Singelis's (1994) scale, which was based on Markus and Kitayama's (1991) early work conceptualizing self-construal as an independent or interdependent self, is not an appropriate measure of self-construal (Cross, Bacon, & Morris, 2000; Fiske, 2002; Hardin, Leong, Bhagwat, 2004; Kashima et al., 1995; Sato & McCann, 1998). In a test of Singelis's (1994) self-construal scale, for example, Hardin and colleagues (2004) found that a six-factor model that included six previously discarded items provided better fit to the data than the original two-factor model.

The measure developed by Gudykunst et al. (1996) is a constellation of 29 items culled from various scales measuring self-construal, individualism-collectivism, separation from in-group, and personality orientation. The authors also included self-construal items they created for the purposes of their study (Gudykunst et al., 1996). Ninety-four items were initially assembled and submitted to principal components analysis with varimax rotation and restricted to a two-factor solution (Gudykunst et al., 1996). The analysis resulted in 14 interdependent and 15 independent items. The reliability estimates for the two subscales from four subsamples ranged from .73 to .85.

Levine et al. (2003) conducted a measurement study on the Gudykunst (1996) scale and reported that based on the chi-square statistic, CFI, GFI, and RMSEA indices, “the fit was clearly unacceptable...[providing] strong evidence of severe measurement problems in the Gudykunst scale” (p. 28).

Another commonly used self-construal scale, the Kim and Leung (1997) revised self-construal scale was also found by Levine et al. (2003) to be problematic. Although this scale has been cited by dozens of studies, it has never been published and a discussion of its psychometric properties is not readily available. Using data from three cross-cultural studies, Levine et al. (2003) conducted three different measurement studies testing the fit of the scale and found that the scale had poor fit to the data in each study.

The Twenty Statements Test (TST) was created to assess self-attitudes and is not a Likert-type scale (Kuhn & McPartland, 1954). Subjects are presented with a list of twenty “Who am I” fill-in-the-blank questions and asked to fill in each blank as if they were talking to themselves. Participants are given no other guidelines for how to fill out the statements except to do it quickly and not worry about importance or logic (Kuhn & McPartland, 1954). That the TST was designed to assess individuals’ global self-attitudes – that is, how they would describe themselves generally and not self-construal, or how they see themselves and guide their thoughts, feelings, and behaviors in relation to others – suggests that the measure may not be ideal for assessing self-construal. Furthermore, the test offers little structure as to how participants should respond, leaving researchers to infer respondents’ level of construal from respondents’ list of self-descriptors. Finally, the TST makes the assumptions that all respondents view themselves as a unique, bounded, stable self across relationships and situations (Harb & Smith, 2008). According

to Harb and Smith (2008), “individuals with interdependent self-construals may have difficulty describing themselves in absolute terms without any contextual or situational references” (p. 179).

To assess self-construal in the present study, Harb and Smith’s (2008) Six-fold Self-construal Scale (SSCS) was used. Harb and Smith (2008) developed the SSCS, a measure of self-construal across six dimensions: personal, relational-horizontal, relational-vertical, collective-horizontal, collective-vertical, and humanity to address the primary empirical and conceptual shortcomings of the most common measures of self-construal, including the various Likert-type measures of self-construal (e.g., Singelis, 1994) and the TST (Kuhn & McPartland, 1954).

First, unlike the TST and the Likert-type scales (e.g., Singelis, 1994; Gudykunst, 1996), the SSCS uses contextualized items (i.e., specific relationships or groups can be inserted into the item stems) since research has shown that context is important for interdependent individuals because their behaviors, thoughts, and emotions are often contingent on the context (Harb & Smith, 2008). Second, the items in many existing self-construal scales stem from descriptions of individualism and collectivism, separation from in-group, and personality orientations (Gudykunst et al., 1996; Harb & Smith, 2008). This is problematic because these measures reflect values which are more or less desirable within one or the other cultural environment rather than the individual’s construal of him or herself in relation to others (Harb & Smith, 2008). Third, the authors explain that the present scales exhibit issues of structural instability and reliability as they have primarily been used in only North American and East Asian samples and rarely have researchers “conducted structural analyses to verify the validity of their measures”

cross-culturally (Harb & Smith, 2008, p. 180). They point to studies with Lebanese, German, and Brazilian participants that demonstrated poor reliability or structural inequivalence and cite studies that suggest that when self-construal is studied cross-culturally, it does not appear to be a bidimensional construct (Harb & Smith, 2008).

Integrating research on self-construal from cross-cultural psychology and self-categorization from social psychology, the authors proposed a six-dimensional structure of self-construal (Harb & Smith, 2008). They began with the view held by some researchers that the self is comprised of three dimensions: the personal, the relational, and the collective self (Brewer & Gardner, 1996; Harb & Smith, 2008). The personal self reflects that part of the individual that is governed by her or his own individual drives and is most closely aligned with the Western, individualistic view of the self (Harb & Smith, 2008). The relational and collective selves reflect the more social self with the former referring to the self in direct dyadic or small group relationships with significant others in one's proximal environment, and the latter referring to the self as a member of a larger, more distal group unified by shared norms and values. Harb and Smith (2008) also identified humanity as a fourth dimension that may influence an individual's construal of her or himself. A person's recognition that she or he is part of the human species may guide one's thoughts and behaviors in ways that are consistent with universal norms and values (Harb & Smith, 2008).

The authors, finally, expanded the concept of the relational and collective self by differentiating between relations with horizontal social dynamics and relations with vertical social dynamics. In relationships with horizontal structures, such as friendships (relational) or university students (collective), equality and egalitarianism are

emphasized, whereas in vertical structures, such as in families (relational) or military soldiers (collective), hierarchy and power differentials are emphasized (Harb & Smith, 2008).

Returning to Markus and Kitayama's initial description of the construct, Harb and Smith (2008) developed five core items that tap into the social, emotional, cognitive, and motivational characteristics of self-construal. A strength of the Harb and Smith (2008) scale is that its items do not specify characteristics like, "I prefer to be self-reliant rather than dependent on others," which though intended to be an independent item, could be interpreted by an interdependent individual as meaning "I can be expected to fulfill my role and not be a burden to others." The SSCS asks more generally if one's behaviors are influenced by others, which is likely to be interpreted more uniformly across cultures and, thereby, result in conceptual invariance. Another strength is that the six sub-scales of the Harb-Smith measure have been shown to yield adequate reliability estimates. Using the sub-scales is advantageous because researchers can select those dimensions of self-construal they are interested in and reduce fatigue by using fewer self-construal items in a study.

This study is concerned with exploring how satisfaction may be affected by variations in construal among African students' due to their attendance at a U.S. university (which may activate their personal self-construal) and due to their African identity (which may activate their relational and collective self-construals because of the social dynamics and norms in African families and African communities). Therefore, only three subscales of the SSCS will be used in this study: the personal-level, the relational-level, and the collective-level subscales. For the purposes of this study, it is not

necessary to differentiate between relational-horizontal and relational-vertical and collective-horizontal and collective-vertical. The item stems will use *family* to represent the target of participants' relational self-construal and participants' African ethnic community to represent the target of their collective self-construal.

Summary

This literature review began by discussing the importance of academic satisfaction and noting that psychosocial conflicts between upholding their traditional African values in a society that espouses antithetical views (the US), may impinge on African students' academic satisfaction. SCCT's satisfaction model was introduced as a lens for viewing the academic adjustment of African college students. Research on the model was briefly reviewed, along with research examining self-construal, a cultural variable that may shed additional light on the academic satisfaction of students, such as Africans, who come from collectivist cultures.

CHAPTER 3: STATEMENT OF THE PROBLEM

College represents a significant developmental period in the lives of students (Pascarella & Terenzini, 1991). Thus, efforts to understand and foster academic satisfaction with the overall college experience are necessary. For African students in U.S. universities and colleges, very little is known about their academic satisfaction and overall college adjustment (Constantine et al., 2005; Kamya, 1997). Though reports reveal that educational attainment rates of 1st, 1.5, and 2nd generation African students are high (Capps et al., 2012), the successes implied by these statistics may belie the fact that academic attainment does not equal academic satisfaction.

The current study represents a modest effort to address this dearth of knowledge. Specifically, this study will explore the academic satisfaction of African students attending U.S. universities and colleges. SCCT is one theory that provides a conceptual framework for understanding academic satisfaction among a diverse range of individuals. SCCT features four segmental models that attempt to explain the factors influencing choice, performance, interest, and satisfaction in vocational domains. (A fifth model is also about to appear; Lent & Brown, 2013). The satisfaction model theorizes about the relationships among self-efficacy, environmental supports, goal progress, outcome expectations, personality and affective traits, domain satisfaction (e.g., academic domain) and life satisfaction (Lent, 2004; Lent & Brown, 2006, 2008; see Figure 1).

The SCCT satisfaction model has been tested across a number of cultural and ethnic communities such as Asian Americans (Hui et al., 2013), Mexican Americans (Ojeda et al., 2011), Portuguese (Lent et al., 2009), Italians (Lent et al., 2011), and Taiwanese (Sheu et al., 2011). Results from these studies generally supported the model's utility in explaining domain and life satisfaction cross-culturally. It, thus, seemed suitable

to employ the model as a platform for studying the academic satisfaction of African students in the US. In addition, SCCT enables exploration of the contribution of both individual variables (e.g., self-efficacy) and contextual/community variables (e.g., environmental support) to participants' satisfaction with their academic lives. This is a pertinent consideration for Africans since educational attainment has typically been related to community expectations and support (Obeng, 2008; Ogbaa, 2003).

The objective of the present study was to test the SCCT satisfaction model with African students attending U.S. universities and colleges. The study added to the model the cultural variable, self-construal. Self-construal is a multi-dimensional construct reflecting the “constellation of thoughts, feelings, and actions concerning one’s relationship to others, and the self as distinct from others” (Singelis, 1994, p. 581). Self-construal has been shown to predict academic adjustment in the context of prior research on the social cognitive model (Sheu et al., 2011).

Sheu et al. (2011) found that interdependence indirectly predicted academic satisfaction via social supports but that independence only directly predicted academic stress in his sample of Taiwanese students in Taiwan. This study still proposes significant direct paths between the dimensions of self-construal and academic satisfaction since it focuses on a different population and examines different dimensions and measures of self-construal. Furthermore, Sheu et al.’s (2011) study is the only one thus far to examine the relationship between self-construal and academic satisfaction. While Sheu et al.’s (2011) findings do inform the present analysis, the proposed hypotheses are not restricted to the findings of their study.

Based on Harb and Smith’s (2008) multidimensional conceptualization of self-

construal, three dimensions of self-construal—personal self-construal, relational self-construal, and collective self-construal—were tested in three separate model tests (Figures 3-5). Since the primary concern was to test the effects of one's construal in relation to one's family and ethnic community (and not, for example, to compare the effects of relational-horizontal to relational-vertical), it was not necessary for the purposes of this study to separate the dimensions into horizontal and vertical levels.

This was the first study to examine the academic satisfaction experiences of African students living in the US using the SCCT satisfaction model. Life satisfaction was not included in the study since the primary goal was to explore the predictors of academic domain satisfaction. Self-construal was treated as a personality trait. Thus, the relationships hypothesized between self-construal and the social cognitive variables were based on the relationships posited by the theory between the affective/dispositional variable and the social cognitive variables. The one exception was the relationship between self-construal and self-efficacy. Conceptually, it did not seem obvious that how individuals see themselves in relationship to self and others would directly predict their confidence in their ability to meet various academic milestones. Therefore, the path from self-construal to self-efficacy was not hypothesized.

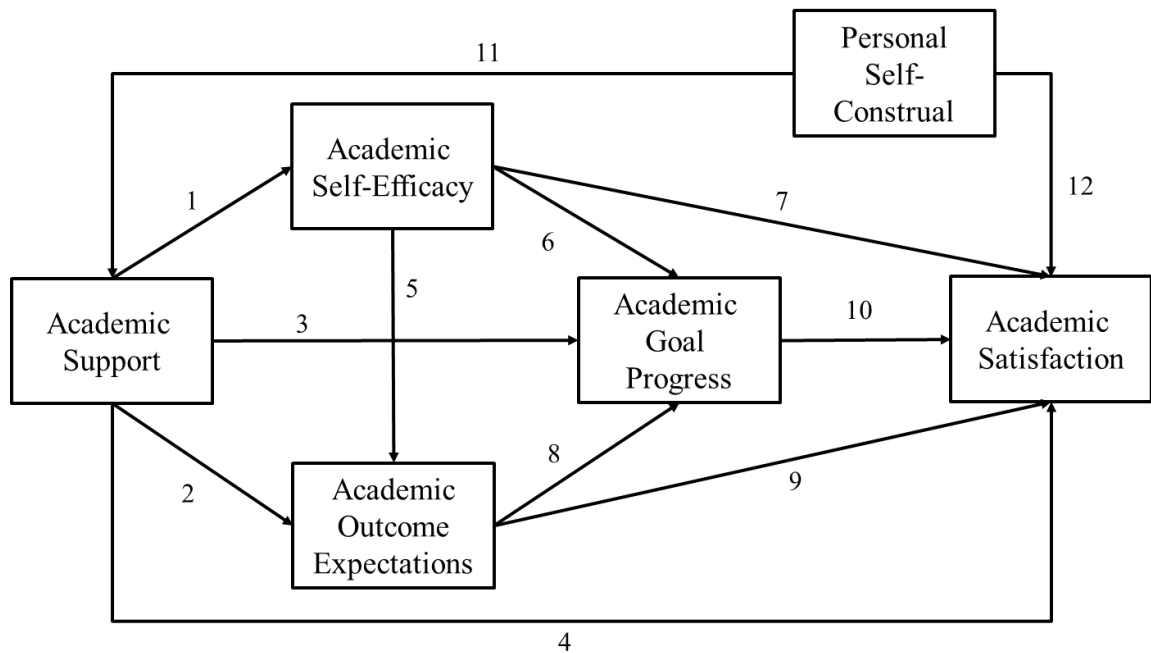


Figure 3. SCCT Satisfaction Model with Personal Level Self-Constraint (Model 1).

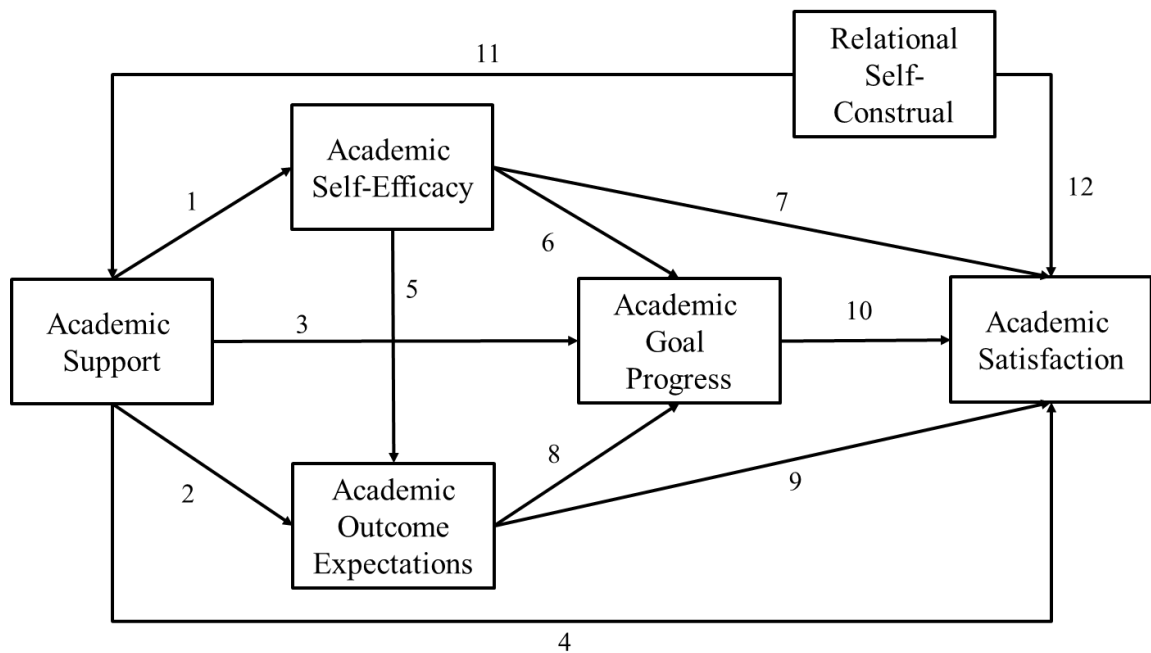


Figure 4. SCCT Satisfaction Model with Relational Level Self-Constraint (Model 2).

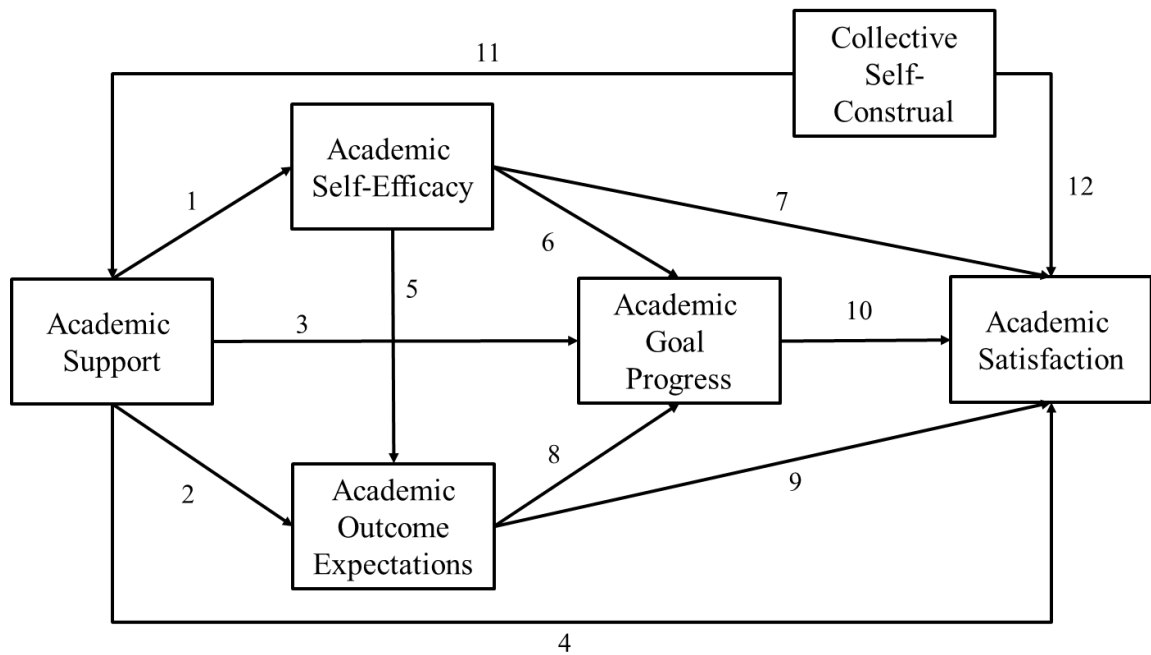


Figure 5. SCCT Satisfaction Model with Collective Level Self-Constraint (Model 3).

Hypotheses

Based on the SCCT satisfaction model, its research base, and studies of self-construal, a number of significant direct and indirect paths are posited in the following hypotheses.

Direct paths. *Hypothesis 1:* The relation of academic support to academic self-efficacy will be positive and significant. (Path 1)

Hypothesis 2: The relation of academic support to academic outcome expectations will be positive and significant. (Path 2)

Hypothesis 3: The relation of academic support to academic goal progress will be positive and significant. (Path 3)

Hypothesis 4: The relation of academic support to academic satisfaction will be positive and significant. (Path 4)

Hypothesis 5: The relation of academic self-efficacy to academic outcome expectations will be positive and significant. (Path 5)

Hypothesis 6: The relation of academic self-efficacy to academic goal progress will be positive and significant. (Path 6)

Hypothesis 7: The relation of academic self-efficacy to academic satisfaction will be positive and significant. (Path 7)

Hypothesis 8: The relation of academic outcome expectations to academic goal progress will be positive and significant. (Path 8)

Hypothesis 9: The relation of academic outcome expectations to academic satisfaction will be positive and significant. (Path 9)

Hypothesis 10: The relation of academic goal progress to academic satisfaction

will be positive and significant. (Path 10)

Hypothesis 11a: The relation of personal self-construal to academic support will be positive and significant. (Path 11, Figure 3)

Hypothesis 11b: The relation of relational self-construal to academic support will be positive and significant. (Path 11, Figure 4)

Hypothesis 11c: The relation of collective self-construal to academic support will be positive and significant. (Path 11, Figure 5)

Hypothesis 12a: The relation of personal self-construal to academic satisfaction will be positive and significant. (Path 12, Figure 3)

Hypothesis 12b: The relation of relational self-construal to academic satisfaction will be positive and significant. (Path 12, Figure 4)

Hypothesis 12c: The relation of collective self-construal to academic satisfaction will be positive and significant. (Path 12, Figure 5).

Indirect paths. Several mediated relationships were hypothesized as follows:

Hypothesis 13: The relation of academic support to academic goal progress will be partly mediated by academic self-efficacy.

Hypothesis 14: The relation of academic support to academic satisfaction will be partly mediated by academic self-efficacy.

Hypothesis 15: The relation of academic support to academic goal progress will be partly mediated by academic outcome expectations.

Hypothesis 16: The relation of academic support to academic satisfaction will be partly mediated by academic outcome expectations.

Hypothesis 17: The relation of academic support to academic satisfaction will be

partly mediated by academic goal progress.

Hypothesis 18: The relation of academic self-efficacy to academic satisfaction will be partly mediated by academic goal progress.

Hypothesis 19: The relation of academic self-efficacy to academic satisfaction will be partly mediated by academic outcome expectations.

Hypothesis 20: The relation of academic outcome expectations to academic satisfaction will be partly mediated by academic goal progress.

Hypothesis 21: The relation of personal self-construal to academic satisfaction will be partly mediated by academic support.

Hypothesis 22: The relation of relational self-construal to academic satisfaction will be partly mediated by academic support.

Hypothesis 23: The relation of collective self-construal to academic satisfaction will be partly mediated by academic support.

Hypothesis 24a: Model 1, with personal level self-construal, academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction, will produce good overall fit to the data.

Hypothesis 24b: Model 2, with relational level self-construal, academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction, will produce good overall fit to the data.

Hypothesis 24c: Model 3, with collective level self-construal, academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction, will produce good overall fit to the data.

Hypothesis 25: The inclusion of personal, relational, and collective self-construals

as predictor variables will account for a significant amount of variance in academic satisfaction, over and above the variance accounted for by the sociocognitive variables.

CHAPTER 4: METHOD

Participants

The population of interest for this study was 1st, 1.5, and 2nd generation African undergraduate students, living in and attending a 4-year university in the US. No restrictions were placed on age, gender, or country of origin. As there are no definitive rules for estimating adequate sample size for structural equation modeling, the primary statistical method used in this study, a number of recommendations were considered (Dilalla, 2000; Hoyle, 2000). Some recommendations range from 150-200 observations for a simple path model to upwards of 5000 for more complex models (Dilalla, 2000; Hoyle, 2000). Researchers have also cited a ratio of 5:1 (five cases to one free parameter), if the model is simple and shows evidence of multivariate normality, to a ratio of 20:1 (Dilalla, 2000; Kline, 2005). A 10:1 ratio might be more realistic and still adequate if the effect size is large and the data exhibit multivariate normality (Kline, 2005; Tabachnick & Fidell, 2007). Previous tests of the SCCT satisfaction model have ranged in sample size from 122 to 769 (e.g., Hui et al., 2013; Singley et al., 2010).

The *N* for the present study was 174 African undergraduates, yielding a 13:1 ratio of cases to free parameters. Of the 202 students who responded to the survey, 28 were deemed ineligible and, therefore, removed from the data base for the following reasons: 18 students were removed because they had already graduated or were in graduate school; 8 students were not in 4-year university programs; 1 student was attending school in Europe; and 1 student did not complete the demographic information. The respondents were mostly women (81.0%), juniors and seniors (60.9%), and over half the respondents were Nigerian (52.9%). Forty-five percent of the respondents were 2nd generation U.S.-born Africans. Table 1 summarizes the demographic characteristics of the sample.

Table 1.*Demographic Characteristics of the Sample*

	Range	Average	SD
Age	18-29	21.1	1.9
Academic GPA (on a 4.0 Scale)	2.1-4.2	3.2	0.4
	N	%	
Gender			
Male	33	19.0	
Female	141	81.0	
College Level			
1 st Year	35	20.1	
2 nd Year	33	19.0	
3 rd Year	43	24.7	
4 th Year	60	34.5	
5 th Year (Senior)	3	1.7	
Generation Level			
1 st Generation	41	23.6	
1.5 Generation	55	31.6	
2 nd Generation	78	44.8	
African Country of Origin			
West African	127	73.0	
Nigerian	92	52.9	
Ghanaian	24	13.8	
Sierra Leonean	5	2.9	
Senegalese	2	1.1	
Gambian	1	0.6	
Ivorian	1	0.6	
Liberian	1	0.6	
Burkinabe	1	0.6	
East African	27	15.5	
Ethiopian	11	6.3	
Kenyan	6	3.4	
Eritrean	4	2.3	
Sudanese	2	1.1	
Somali	1	0.6	
South Sudanese	1	0.6	
Ugandan	1	0.6	
Burundian	1	0.6	

South African	8	4.6
South African	3	1.7
Zimbabwean	2	1.1
Batswana	1	0.6
Malagasy	1	0.6
Mosotho	1	0.6
Central African	11	6.3
Cameroonian	9	5.2
Congolese	2	1.1
North African	1	0.6
Algerian	1	0.6
U.S.-born		
Yes	78	44.8
No	96	55.2
U.S. Citizen (if not U.S.-born)		
Yes	39	40.6
No	57	59.4
Int'l Student (if not U.S. Citizen)		
Yes	25	43.9
No	32	56.1
First in Family to attend U.S. College		
Yes	45	25.9
No	129	74.8
Parents attended	90	51.7
Siblings attended	39	22.4
University Region		
Mid-Atlantic	99	56.9
Midwest	20	11.5
Northeast	21	12.1
Northwest	1	0.6
Southeast	10	5.7
Southwest	12	6.9
West	11	6.3
Major Type		
Arts	2	1.1
Business	12	6.9
Health & Human Services	25	14.4
Humanities	4	2.3
Math & Economics	13	7.5
Natural Science	37	21.3
Social Science	50	28.7
Technology & Engineering	28	16.1
Undecided	3	1.7

Mother's Highest Education		
Below High School	8	4.6
High School	21	12.1
Some College	20	11.5
Associate's Degree	21	12.1
Bachelor's Degree	47	27.0
Professional Degree	21	12.1
Graduate Degree	35	20.1
Other	1	0.6
Father's Highest Education		
Below High School	4	2.3
High School	16	9.2
Some College	17	9.8
Associate's Degree	8	4.6
Bachelor's Degree	49	28.2
Professional Degree	30	17.2
Graduate Degree	47	27.0
Other	3	1.7

Note. $N= 174$.

Measures

Academic self-efficacy scale (Appendix D). The academic self-efficacy scale features 12 items measuring two types of self-efficacy: self-efficacy for general academic achievements (5 items; e.g., “How confident are you in your ability to excel in your intended major over the next two semesters”) and self-efficacy for coping with certain academic challenges (7 items; e.g., “How confident are you in your ability to complete a degree despite financial pressures”). Both subscales use a 10-point scale ranging from 0 (no confidence) to 9 (complete confidence). Total scale scores were calculated by summing item responses and dividing by 12.

Lent et al. (2005) found evidence of discriminant validity for the academic self-efficacy measure with a small correlation between this measure and a measure of social domain self-efficacy ($r = .24$). Criterion-related validity was evidenced by significant correlations between this measure and measures of academic adjustment and intended persistence (Lent et al., 2005). A previous study (Lent et al., 2005) calculated adequate internal consistency reliability estimates for these measures: $\alpha = .88$ (academic milestone self-efficacy) and $\alpha = .85$ (academic coping self-efficacy). As evidence of test-retest reliability, Lent et al. (2009) calculated significant and large correlations between two administrations of the academic self-efficacy measure spaced over a 15-week period ($r = .71$). The Cronbach α for the full academic self-efficacy measure in the present study was .89; reliability estimates for the academic milestone self-efficacy and coping self-efficacy subscales were, respectively, $\alpha = .87$ and $\alpha = .85$.

Academic support scale (Appendix E). The academic support scale is a 9-item measure that assesses participants’ perceptions of their academic domain-specific support

(e.g. “At the present time, I feel support from important people in my life (e.g., teachers) for pursuing my intended major”). All nine items are measured on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Scale scores were obtained by summing all the items within the scale and dividing the sum by 9.

Criterion-related validity was estimated through significant correlations between this measure and measures of academic adjustment and intended persistence (Lent et al., 2005). Lent et al. (2005) found a moderate correlation between this measure and a measure of social domain support ($r = .41$), suggesting that this measure reflects perceptions that are partly domain-specific in nature. Lent et al. (2005) calculated an internal consistency reliability estimate of $\alpha = .81$ for this measure and Singley et al. (2010) obtained an 8-week test–retest correlation of $r = .68$. The reliability estimate for the academic support scale in this study was $\alpha = .83$.

Academic outcome expectations scale (Appendix F). The items of the 10-item academic outcome expectations scale are designed to capture individuals’ beliefs about potential outcomes that could result from their academic pursuits, (e.g. “A college education will allow me to obtain a well-paying job”). The items are measured on a 10-point scale from 0 (strongly disagree) to 10 (strongly agree). The scale score was obtained by dividing the sum of the item ratings within the scale by 10.

In terms of discriminant validity, Lent et al. reported a moderate correlation between this measure and a measure of social outcome expectations (.34). Significant correlations between this measure and measures of academic interest and choice provided evidence of criterion-related validity (Lent et al., 2007). Lent et al. (2005) reported a reliability estimate of $\alpha = .91$. The internal consistency reliability estimate was .94 for the

academic outcome expectations scale in the present study.

Academic goal progress scale (Appendix G). The academic goal progress scale features 7 items that assess participants' perceived progress towards academic goals (e.g. "How much progress are you making toward [completing academic requirements of your major satisfactorily] at this point in time (i.e., so far this semester).") Items are measured on a 5-point scale ranging from 1 (no progress at all) to 5 (excellent progress). Scale scores were calculated by summing all the items and dividing by 7.

A small correlation between this measure and a measure of social goal progress ($r = .16$) and significant correlations between this measure and measures of academic adjustment and intended persistence provided evidence of discriminant and criterion-related validity, respectively (Lent et al., 2005). Lent et al. (2005) found this measure to have an internal consistency reliability estimate of $\alpha = .86$. Adequate test-retest reliability ($r = .62$) was calculated by Singley et al. (2010). In the present study, the reliability estimate for the academic goal progress scale was $\alpha = .93$.

Academic satisfaction scale (Appendix H). The academic satisfaction scale consists of 7 items that ask participants about their satisfaction with certain aspects of their academic experience (e.g. "I enjoy the level of intellectual stimulation in my courses"). Items are measured on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). The scale scores were produced by summing all the items within the scale and dividing the sum by 7.

The measure correlated only modestly ($r = .25$) with a measure of social domain satisfaction in prior research, offering evidence of discriminant validity (Lent et al., 2005). Criterion-related validity was estimated via significant correlations between this

measure and measures of academic adjustment and intended persistence (Lent et al., 2005). The internal consistency reliability estimate for this sample was $\alpha = .87$ (Lent et al., 2005) and 8 week test-retest reliability was $r = .69$ (Singley et al., 2010). Cronbach's alpha for the academic satisfaction scale in this study was .90.

Sixfold self-construal scale (Appendix I). The SSCS contains five core items that are repeated to assess individual's self-construal across each of six dimensions: personal-level, relational-horizontal level, relational-vertical level, collective-horizontal level, collective-vertical level, and humanity-level, resulting in a 30-item scale. On a 7-point scale, participants rate the extent to which they agree with each of the items. Sample items are "I control my behavior to accommodate the wishes (interests) of myself" and "I am affected by events that concern (relate to) the Ethiopian² community."

To test the validity of the SSCS, Harb and Smith (2008) administered their 30-item scale to a cross-cultural sample of 170 British students, 227 Lebanese students, 232 Syrian students, and 226 Jordanian students. For the item stems, they used "friends" and "family" to represent relational-horizontal and relational-vertical level construals, respectively; and "students at my university" and "political, governmental, or religious group" to represent collective-horizontal and collective-vertical level construals, respectively.

Harb and Smith (2008) conducted an exploratory factor analysis (EFA) with principal axis factoring and equamax rotation, which revealed that for all of the subsamples, all of the items except for one loaded highest on its expected factor. The one exception was the relational-horizontal item for British participants; it loaded highest on

² Participants selected their African ethnicity at the start of the survey and their selection was then populated into the SSCS collective self-construal item stems.

the relational-vertical factor. They followed up these findings by conducting a multi-group confirmatory factor analysis (CFA) using a weighted samples covariance matrix on the same data. The resulting fit indices revealed adequate fit to the data in the full dataset, $\chi^2(1946) = 3,678.71, p < .01$, RMSEA = .053, and CFI = .96. Country-specific CFAs also produced acceptable fit to the data.

As evidence of concurrent validity the authors tested the relationships among the six levels of self-construal with related concepts from other scales and found results consistent with the expected relationships. For example, when correlated with the Schwartz Value Scale (Schwartz, 1992), values like self-direction, achievement, and power correlated most strongly with the personal-level self-construal over any other levels; conformity correlated most strongly with the relational-vertical over other levels; and universalism correlated most strongly with the humanity level over other levels (Harb & Smith, 2008). The scores from each of the subscales for each of the subsamples yielded adequate Cronbach's α reliabilities ($\alpha = .70-.92$), except for the Personal subscale scores of Jordanian participants, which was $\alpha = .68$.

In the present study, only the personal, relational, and collective subscales were used. The subscale scores were produced by summing all the items within each subscale and dividing the sum by number of items in each subscale. The internal consistency reliability estimates for the personal self-construal, relational-level self-construal, and collective-level self-construal subscales were .63, .73, and .86, respectively.

Procedures

Approval from the University of Maryland, College Park Institutional Review Board was obtained prior to participant recruitment. An online version of the survey was

hosted on Qualtrics, a web-based survey platform. The survey included the academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction measures; three subscales of the SSCS; and a demographic questionnaire. The opening page of the survey contained information summarizing the study and its purpose, describing participants' confidentiality, and securing participants' consent to participate in the study (Appendix C). The opening page also contained contact information for the study's author and her research advisor. At the end of the survey, participants' characteristics and demographic information was collected (e.g., gender, age, country of birth, ethnic [family] origin, university type, university region, GPA) (Appendix J).

The initial aim of this study was to test the SCCT satisfaction model in Nigerian college students, thus the initial wave of data collection targeted only Nigerian students. However, this sampling strategy did not yield a sufficient sample size. The study was therefore expanded to include students from any African country. Data were collected from a number of sources. Recruitment efforts included email, social media, and word-of-mouth outreach. All individuals and groups were contacted via email, and a link to the survey was included inviting them to participate in the study (Appendix A). Students were recruited from African Student Associations, Ethiopian Student Associations, Eritrean Student Associations, Nigerian Student Associations, Egyptian Student Associations, and any other African-affinity student groups at the author's university and across the country. An online search, using terms such as "African Student Association," "African Student Union," "African Student Organization," "Nigerian Student Association," and "Ethiopian Student Association," was conducted to collect contact

information for African student groups at universities across the United States. Student groups were also contacted via Facebook. The author created a research-only Facebook account to connect with groups that did not have publicly available email addresses.

Students were also recruited during the annual Nigerian Reunion Conference, a cultural and social gathering for Nigerian students living in the US, held in Baltimore, MD on July 6th 2012. Email addresses were collected during the conference and students were later emailed the survey. The Office of the Registrar at the author's university generated a list of African international students to whom the survey was sent. The study was submitted to SONA, an online portal the psychology department at the author's university uses to manage web-based studies that students can complete for extra credit.

African students were recruited from African-serving churches in the DC metro area and a request to disseminate the survey was sent to the DC Mayor's Office on African Affairs, which hosts events for college-aged African youth. Emails were also sent to Yahoo listservs for different African community members living in the US. Members of these groups were encouraged to share the link with their college-going children and any other university students they knew. Instructors at historically black colleges and universities with listed contact information were contacted and asked to share the survey link with their students. Finally, the author used her personal contacts (i.e., friends and family members) to distribute the survey to African college students, and flyers, which directed students to the online survey, were posted around the author's university campus (Appendix B). Data collection lasted three months.

Participants who completed the study were automatically redirected to a different landing page and invited to participate in a raffle to win one of twenty \$4.00 MP3 gift

cards to the online retailer, Amazon.com. On the new page, participants were asked for their name and contact information. Information gathered on this page was not linked to participants' responses, thereby ensuring anonymity. At the close of data collection, the raffle was conducted using RandomPicker, an online raffle service, to ensure that the winners were randomly selected. There were 91 entrants in the raffle, of which 90 were eligible for the raffle. Twenty students were randomly selected and an email was sent to all raffle winners.

CHAPTER 5: RESULTS

Preliminary Analyses

The range of the values was checked using the Statistical Package for Social Science (SPSS) v. 19.0 program to confirm no data points were outside the possible scaling ranges. There were no missing data as the survey was hosted online and the settings of the survey required a response for each item. The statistical assumptions of the analyses were checked before proceeding with hypothesis testing (Schreiber, Nora, Stage, Barlow, & King, 2006). Using SPSS 19.0, the data were assessed for outliers, linearity, skewness and kurtosis, and multicollinearity. Multivariate normality was assessed using the Linear Structural Relations (LISREL) v. 9.10 program (Jöreskog & Sörbom, 1996).

The variable item means were plotted on bivariate scatterplots to assess linearity. The plots exhibited diffuse oval shapes, which were indicative of a linear function. Univariate normality was assessed with Q-Q plots of the residuals and by checking skewness and kurtosis (Cohen, 2001; Cohen, Cohen, West, & Aiken, 2003; Kline, 2012). The points of the Q-Q plots in general fell on the normal distribution line with some points deviating from the line at the tail ends. This pattern is indicative of normally distributed residuals (Cohen et al., 2003). The skewness and kurtosis indices of the data did not reveal any extremely non-normally distributed variables. Skewness indices greater than 3.0 and kurtosis indices greater than 8.0 have been offered as cutoffs of extreme skew and kurtosis, respectively (Kline, 2012). Based on the skewness and kurtosis indices of the sample data, transformations were not performed. Using Mardia's test of normality in SPSS, the assumption of multivariate normality was checked (DeCarlo, 1997). There is some consensus that a value greater than three suggests

multivariate nonnormality (Finney & Distefano, 2006). Mardia's value was 101.36, $p < .01$, indicating violation of the assumption of multivariate normality. Therefore, robust maximum likelihood estimation was used in the structural equation analyses.

Multicollinearity of the variables was examined by checking the tolerance and variance inflation factor (VIF) values. Multicollinearity refers to a high degree of correlation among the independent variables of a regression model (Cohen et al., 2003). Tolerance values less than .10 and VIF values greater than 10 suggest severe multicollinearity (Cohen et al., 2003). Tolerance values for the variables of the model ranged from .427 to .680 and VIF values ranged from 1.379 to 2.343, indicating that multicollinearity was not problematic.

Descriptive Statistics

Descriptive statistics for each of the variables in the model are presented in Table 2. Participants' mean scores on the self-construal subscales indicate moderately high personal self-construal and family-based relational self-construal, whereas collective self-construal mean scores were closer to the scale mid-point and demonstrated somewhat greater variability. Ratings on the social cognitive variables were generally on the high end of the scaling, reflecting positive perceptions of academic experiences.

Table 2.*Descriptive Statistics of the Independent and Dependent Variables*

	Range	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	α
Personal Self-Constructual	3.60 – 7.00	6.00	0.72	-0.779	0.368	.63
Relational Self-Constructual	3.40 – 7.00	6.14	0.77	-1.199	1.070	.73
Collective Self-constructual	1.20 – 7.00	4.47	1.38	-0.259	-0.672	.86
Academic Self-Efficacy	1.58 – 9.00	7.52	1.13	-1.395	3.932	.89
Academic Social Support	1.89 – 5.00	3.86	0.74	-0.452	-0.404	.83
Academic Outcome Expectations	1.40 – 9.00	7.22	1.45	-1.187	2.130	.94
Academic Goal Progress	1.00 – 5.00	3.78	0.84	-0.783	0.695	.93
Academic Satisfaction	1.00 – 5.00	3.96	0.77	-0.786	0.988	.90

Table 3.*Correlations among Independent and Dependent Variables*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Personal Self-Constructual	6.00	0.72	1.00							
2. Relational Self-Constructual	6.14	0.77	.184**	1.00						
3. Collective Self-constructual	4.47	1.38	.127*	.465**	1.00					
4. Academic Self-Efficacy	7.52	1.13	.333**	.171*	.053	1.00				
5. Academic Social Support	3.86	0.74	.201**	.233**	.143*	.377**	1.00			
6. Academic Outcome Expectations	7.22	1.45	.464**	.132*	.164*	.361**	.394**	1.00		
7. Academic Goal Progress	3.78	0.84	.256**	.166*	-.015	.705**	.341**	.374**	1.00	
8. Academic Satisfaction	3.96	0.77	.298**	.174*	.063	.628**	.388**	.697**	.514**	1.00

Note. ** $p < .01$, * $p < .05$

Hypothesis Testing

Direct paths. Several hypotheses were proposed regarding the direct relationships among the variables in this study.

Hypothesis 1: The relation of academic support to academic self-efficacy will be positive and significant.

Hypothesis 2: The relation of academic support to academic outcome expectations will be positive and significant.

Hypothesis 3: The relation of academic support to academic goal progress will be positive and significant.

Hypothesis 4: The relation of academic support to academic satisfaction will be positive and significant.

Hypothesis 5: The relation of academic self-efficacy to academic outcome expectations will be positive and significant.

Hypothesis 6: The relation of academic self-efficacy to academic goal progress will be positive and significant.

Hypothesis 7: The relation of academic self-efficacy to academic satisfaction will be positive and significant.

Hypothesis 8: The relation of academic outcome expectations to academic goal progress will be positive and significant.

Hypothesis 9: The relation of academic outcome expectations to academic satisfaction will be positive and significant.

Hypothesis 10: The relation of academic goal progress to academic satisfaction will be

positive and significant.

Hypothesis 11a: The relation of personal self-construal to academic support will be positive and significant.

Hypothesis 11b: The relation of relational self-construal to academic support will be positive and significant.

Hypothesis 11c: The relation of collective self-construal to academic support will be positive and significant.

Hypothesis 12a: The relation of personal self-construal to academic satisfaction will be positive and significant.

Hypothesis 12b: The relation of relational self-construal to academic satisfaction will be positive and significant.

Hypothesis 12c: The relation of collective self-construal to academic satisfaction will be positive and significant.

These hypotheses were tested using measured variable path analysis. Path analysis is a type of structural equation modeling that assesses the strengths of direct and indirect effects in an *a priori*, theory-based model (Lleras, 2005). While overall model-data fit will be described below, the path coefficients obtained from model testing (see Figures 6-8) provided support for hypotheses 1-2, 5-7, and 9-11c based on positive and statistically significant path coefficients, $p < .05$. The direct effects between academic support and academic goal progress (.05; hypothesis 3); academic support and academic satisfaction (.06; hypothesis 4); and academic outcome expectations and academic goal progress (.12; hypothesis 8) were not significant at $p < .05$. There was also a lack of support for the direct relations of the self-construal variables to

academic satisfaction (hypotheses 12a-12c).

Indirect paths. Several mediated effects were hypothesized as follows:

Hypothesis 13: The effect of academic support to academic goal progress will be partly mediated by academic self-efficacy.

Hypothesis 14: The effect of academic support to academic satisfaction will be partly mediated by academic self-efficacy.

Hypothesis 15: The effect of academic support to academic goal progress will be partly mediated by academic outcome expectations.

Hypothesis 16: The effect of academic support to academic satisfaction will be partly mediated by academic outcome expectations.

Hypothesis 17: The effect of academic support to academic satisfaction will be partly mediated by academic goal progress.

Hypothesis 18: The effect of academic self-efficacy to academic satisfaction will be partly mediated by academic goal progress.

Hypothesis 19: The effect of academic self-efficacy to academic satisfaction will be partly mediated by academic outcome expectations.

Hypothesis 20: The effect of academic outcome expectations to academic satisfaction will be partly mediated by academic goal progress.

Hypothesis 21: The effect of personal self-construal to academic satisfaction will be partly mediated by academic support.

Hypothesis 22: The effect of relational self-construal to academic satisfaction will be partly mediated by academic support.

Hypothesis 23: The effect of collective self-construal to academic satisfaction will be partly mediated by academic support.

Partial mediation was assessed using tests of joint significance (TJS; Mallinckrodt, Abraham, Wei, & Russell, 2006). As evidence of partial mediation, TJS requires that the path from the predictor to the mediator and the mediator to the criterion be significant (Mallinckrodt et al., 2006). Five of the 11 indirect path hypotheses were supported. Hypotheses 15 and 20 failed to achieve significance because the path between academic outcome expectations and academic goal progress was nonsignificant. Hypothesis 17 was not supported because although the path from academic goal progress to academic satisfaction was significant, the path from academic support to academic goal progress was not. Hypotheses 21 through 23 did not reach significance because the path from academic support to academic satisfaction was not significant.

Model-data fit. The fit of the model for each type of self-construal was tested separately, with one analysis including personal-level construal, the second including relational construal, and the third test including collective construal (Figures 6-8). The relevant hypotheses were as follows:

Hypothesis 24a: Model 1, with personal level self-construal, academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction, will produce good overall fit to the data.

Hypothesis 24b: Model 2, with relational level self-construal, academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction, will produce good overall fit to the data.

Hypothesis 24c: Model 3, with collective level self-construal, academic self-efficacy, academic support, academic goal progress, academic outcome expectations, and academic satisfaction, will produce good overall fit to the data.

To test the overall fit of the three proposed models, the model covariance matrices were analyzed using robust maximum likelihood (ML) estimation in LISREL 9.10 in a measured variable path analysis (Table 4) (Jöreskog & Sörbom, 1996).

The chi-square fit index, root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), and comparative fit index (CFI) were calculated to determine the fit of the proposed models to the data (Hoyle, 2000). A nonsignificant chi-square fit index indicates that the observed covariance matrix does not differ significantly from the expected covariance matrix, suggesting good model fit (Dilalla, 2000). As evidence of good model fit on the RMSEA, another measure of discrepancy between the observed and expected covariance matrices (Hoyle, 2000), values close to .06 have been proposed (Hu & Bentler, 1999). For the SRMR, which calculates the average discrepancy between the observed and expected intercorrelations (Dilalla, 2000), values close to .08 are considered indicative of good model fit (Hu & Bentler, 1999). A cutoff value of .95 or above for the CFI, which compares a null model (i.e., with no paths linking the variables) to the theorized model (i.e., with all the hypothesized paths), has also been suggested (Hu & Bentler, 1999). Regarding hypothesis 24a, the results of the path analysis revealed that model 1, the personal self-construal model, did not provide adequate fit to the data, Santorra-Bentler scaled $\chi^2(3) = 59.320, p < .01$; RMSEA = .276; CFI = .888; and SRMR = .120. In contrast, model 2, the relational self-construal model, offered good fit to the data, Santorra-Bentler scaled $\chi^2(3) =$

2.449, $p = .48$; RMSEA = .00; CFI = 1.00; and SRMR = .031 (hypothesis 22b). Model 3, the collective self-construal model, also provided evidence of good model fit, Santorra-Bentler scaled $\chi^2(3) = 6.365$, $p = .10$; RMSEA = .058; CFI = .992; and SRMR = .027 (hypothesis 22c).

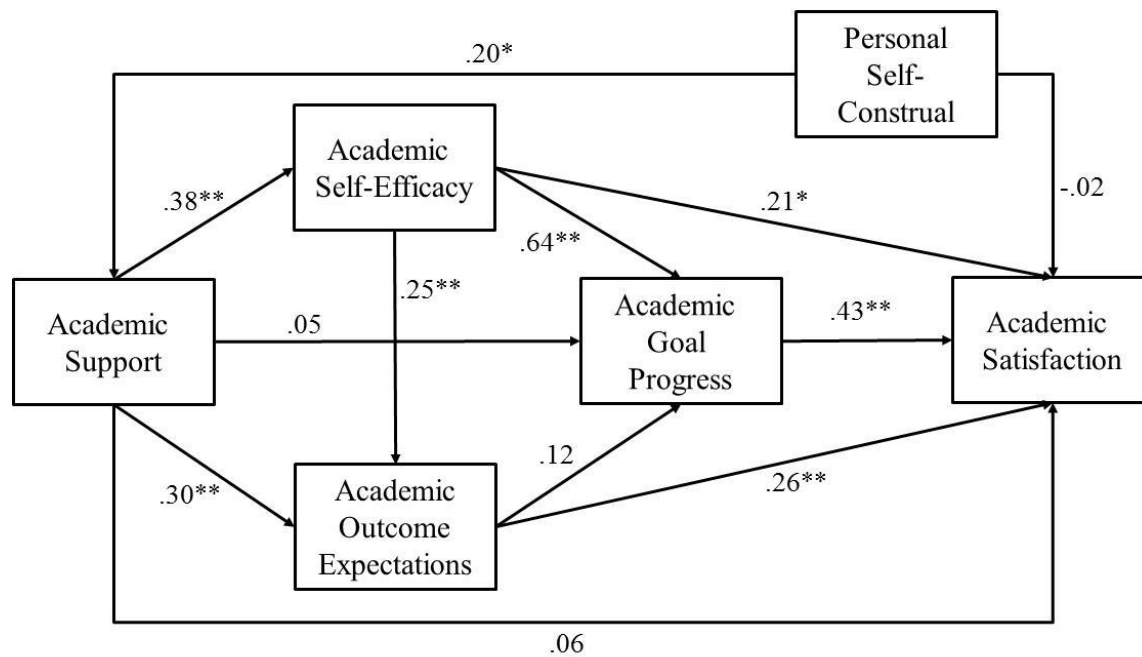


Figure 6. Parameter Estimates of the SCCT Satisfaction Model with Personal Level Self-Constraint (Model 1). * $p < .05$, ** $p < .01$

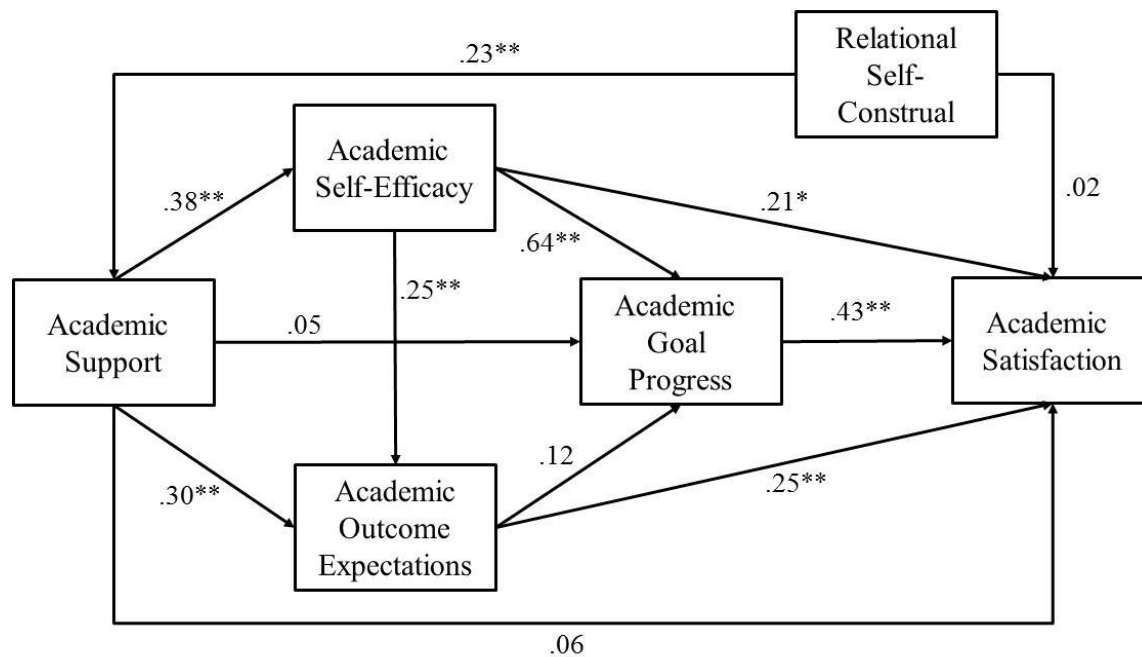


Figure 7. Parameter Estimates of the SCCT Satisfaction Model with Relational Level Self-Constraint (Model 2). * $p < .05$, ** $p < .01$

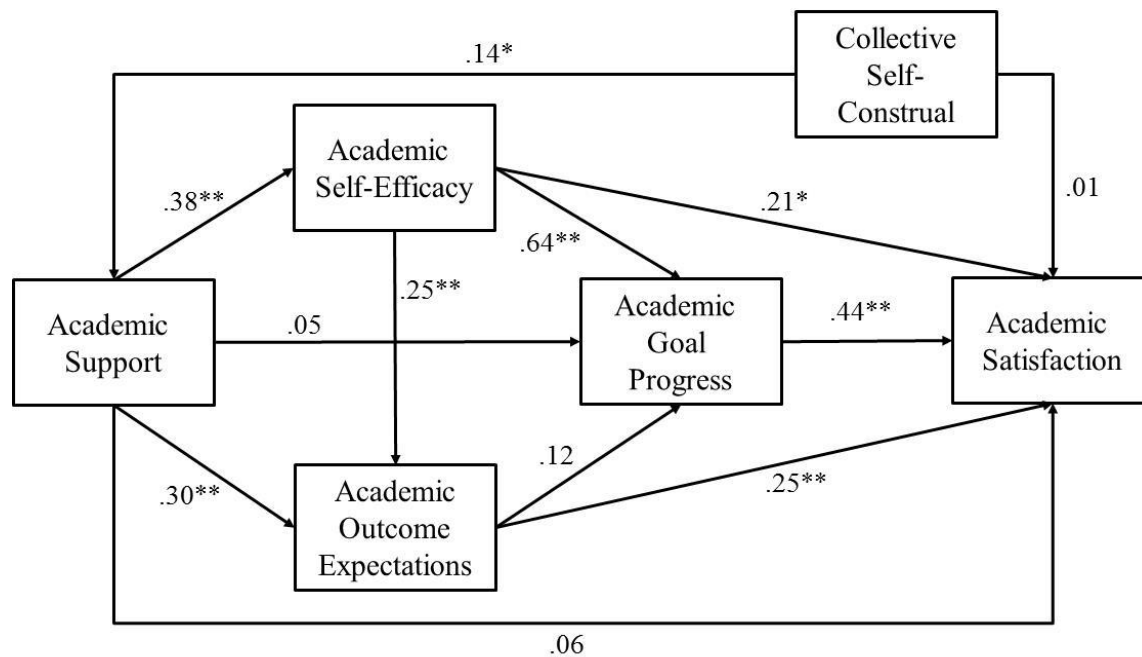


Figure 8. Parameter Estimates of the SCCT Satisfaction Model with Collective Level Self-Constraint (Model 3). * $p < .05$, ** $p < .01$

Table 4.*Goodness-of-Fit Indices for the Three Hypothesized Models*

Model	<i>df</i>	S-B χ^2	<i>p</i>	RMSEA	CFI	SRMR
Model 1	3	59.320	<.01	.276	.888	.120
Model 2	3	2.449	.48	.000	1.000	.031
Model 3	3	6.365	.10	.058	.992	.027

Linear hierarchical regression. The last analysis assessed the unique contribution of the self-construal variables in explaining variance in the dependent variable, academic satisfaction.

Hypothesis 25: The inclusion of personal, relational, and collective self-construals as predictor variables will account for a significant amount of variance in academic satisfaction, over and above the variance accounted for by the sociocognitive variables.

Using SPSS 19.0, a linear hierarchical regression was conducted. In the first step, academic support, academic self-efficacy, academic outcome expectations, and academic goal were entered as a set of independent variables predicting academic satisfaction. In the second step, personal self-construal, relational self-construal, and collective self-construal were entered. The results of this analysis revealed that the addition of the self-construal variables did not account for additional significant variance over and above that accounted for by the social cognitive variable set in explaining academic satisfaction ($\Delta R^2 = .001, p = .967$) (Table 5). Three of the four social cognitive predictors had significant beta weights: academic self-efficacy ($\beta = .207, p < .01$), academic outcome expectations ($\beta = .252, p < .01$), and academic goal progress ($\beta = .435, p < .01$). Academic support was not a significant unique predictor of academic satisfaction ($\beta = .063, p = .264$). Collectively, the social cognitive variables accounted for 59% of the variance in academic satisfaction.

Table 5.*Hierarchical Regression Analyses of Social Cognitive and Self-construal Variables on Academic Satisfaction*

Predictor Variables Entered	R^2	ΔR^2	F	ΔF	p	B	β	t
Step 1	.587	--	60.086	--	< .01			
Academic Support						.065	.063	1.120
Academic Self-Efficacy						.139	.207	2.889**
Academic Outcome Expectations						.133	.252	4.490**
Academic Goal Progress						.396	.435	6.126**
Step 2	.588	.001	33.816	.087	.967			
Personal Self-construal						-.020	-.019	-.328
Relational Self-construal						.023	.023	.390
Collective Self-construal						-.001	-.001	-.017

Note. ** = $p < .01$, * = $p < .05$

Supplemental Analyses

Alternative models. Based on the results of the individual models, a fourth, more parsimonious model (model 4) was proposed (Figure 9). All three types of self-construal were entered simultaneously in model 4 and, since they represent the common construct of self-construal, were allowed to covary. No direct effects from self-construal to academic satisfaction were hypothesized in this model. Figure 9 shows that personal self-construal and relational self-construal covaried significantly, as did relational self-construal and collective self-construal, but personal self-construal and collective self-construal did not covary significantly. Entering all three types of self-construal into the model and removing the direct effect of self-construal to academic satisfaction did not result in adequate model fit, Santorra-Bentler scaled $\chi^2(12) = 74.818$, $p < .01$; RMSEA = .136; CFI = .891; and SRMR = .097. Modification indices suggested the addition of a path from personal self-construal to academic self-efficacy and from personal self-construal to academic outcome expectations. A fifth model (Figure 10) including these paths was then tested. It showed excellent model-data fit, Santorra-Bentler scaled $\chi^2(10) = 15.644$, $p = 0.11$; RMSEA = .00; CFI = .990; and SRMR = .025. The paths from personal self-construal to academic self-efficacy and outcome expectations produced significant parameter estimates. Statistical comparison of the two models using the difference test for the Satorra-Bentler scaled chi-square (Satorra & Bentler, 2001) indicated that Model 5 fit the data significantly better than did Model 4 (see Table 6).

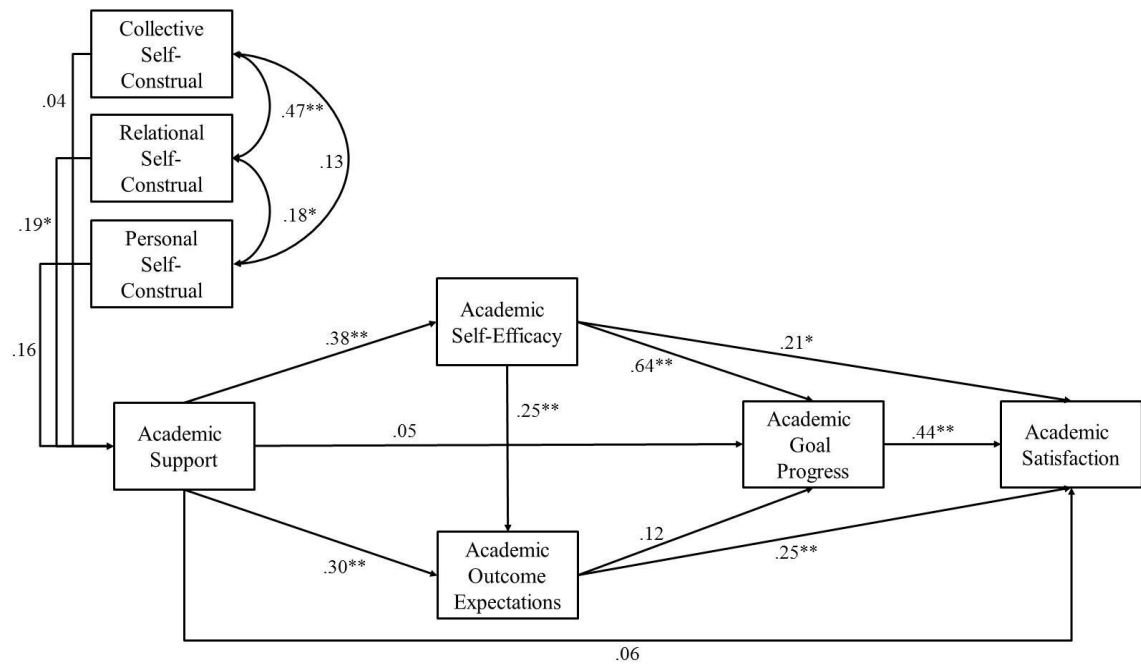


Figure 9. Parameter Estimates of the Parsimonious Indirect Effects Model (Model 4). * p

$< .05$, ** $p < .01$

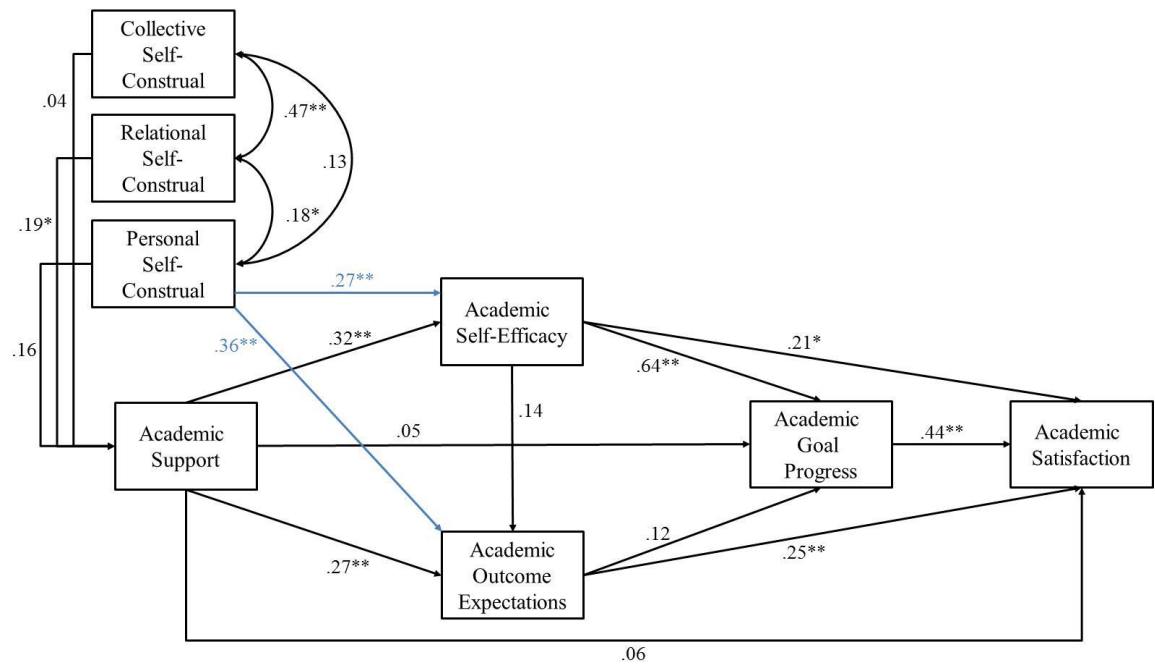


Figure 10. Parameter Estimates of the Alternative Model (Model 5). * $p < .05$, ** $p < .01$

Table 6.*Goodness-of-Fit Indices for the Alternative Models*

Model	<i>df</i>	S-B χ^2	<i>p</i>	RMSEA	CFI	SRMR	Δdf	Δ S-B χ^2	<i>p</i>
Model 4	12	74.818	< .01	0.136	0.891	0.097	--		
Model 5	10	15.644	0.11	0.000	0.990	0.025	2	29.421 (M ₄ vs. M ₅)	< .01

Group comparisons. Despite similarities due to their shared African heritage, differences in the extent of exposure to U.S. customs and culture between U.S.-born African students and African students born abroad may result in differences in attitudes and values. To examine the characteristics of these two groups, sample descriptives and correlation tables were run separately for each group. Linear regression analyses were also conducted to determine whether the predictors of the model differed significantly between the two groups.

Using multivariate analysis of variance (MANOVA), the differences between the U.S. group and non-U.S. group were found to be minimal (see Table 7). The groups were comparable in their average ratings on the eight variables under study. Cronbach's alphas for the two groups were also similar except for personal self-construal. U.S.-born African students had an internal reliability estimate of .71, while non-U.S.-born African students had an internal reliability estimate of .57 on this measure.

Table 7.

Comparison of Descriptive Statistics of the Independent and Dependent Variables between U.S.-Born and Foreign-Born Africans

	α		M		SD		$F(1, 172)$	p	η_p^2
	US	Non-U.S.	US	Non-U.S.	US	Non-U.S.			
Personal Self-Conceptual	.71	.57	6.11	5.89	.71	.72	3.895	.050 [§]	.022
Relational Self-Conceptual	.73	.74	6.13	6.14	.75	.79	0.012	.912	.000
Collective Self-construal	.88	.85	4.35	4.56	1.44	1.33	1.011	.316	.006
Academic Self-Efficacy	.90	.87	7.49	7.54	1.22	1.07	0.095	.759	.001
Academic Social Support	.84	.82	3.92	3.81	.77	.71	0.917	.340	.005
Academic Outcome Expectations	.94	.93	7.18	7.25	1.56	1.35	0.185	.667	.001
Academic Goal Progress	.94	.92	3.75	3.81	.91	.78	0.093	.761	.001
Academic Satisfaction	.90	.91	3.89	4.01	.80	.74	1.030	.311	.006

Note. $N_{US} = 78$; $N_{Non-U.S.} = 96$; [§] $p = .05$

Moderated effects. The earlier review of self-construal suggested that the different dimensions of self-construal might have different effects on academic satisfaction depending on individuals' levels of exposure to or identification with Western or individualistic culture. To test this relationship, regression analyses analyzing the main and interaction effects of self-construal and generational status on academic satisfaction were conducted.

The continuous predictor variables, personal self-construal, relational self-construal, and collective self-construal, were standardized to reduce multicollinearity between the main effects and interaction terms (Cohen et al., 2003). Generational status, a categorical variable with three levels, was dummy-coded into two variables (Frazier, Tix, & Barron, 2004; West, Aiken, & Krull, 1996). The standardized variables were multiplied with the dummy-coded variables to create two interaction terms (Cohen et al., 2003; Frazier et al., 2004). In separate multiple regression tests, the standardized variable of one dimension of self-construal and the two dummy-coded variables were entered in the first step. The two interaction terms were entered in the second step (Frazier et al., 2004). This test was repeated for each dimension of self-construal.

The results revealed that the interaction between personal self-construal and generational status did not account for a significant amount of variance in academic satisfaction, $\Delta R^2 = .015$, $\Delta F(2, 168) = 1.481$, $p = .230$. The simple slope of personal self-construal ($\beta = .127$, $p = .226$) was not significant. Conversely, at mean values of personal self-construal, the slope for 1.5 generation ($\beta = -.415$, $p = .006$) and 2nd generation ($\beta = -.433$, $p = .002$) were significantly different from the slope for 1st generation students (see Figure 11). Neither the interactions between personal self-construal and 1.5 generation

status ($\beta = .112, p = .449$) nor the interaction between personal self-construal and 2nd generation status ($\beta = .227, p = .090$) was significant.

In the regression analysis with relational self-construal, the variance explained by the interactions terms was not significant, $\Delta R^2 = .003, \Delta F(2, 168) = .285, p = .752$. The simple slope for relational self-construal was not significant ($\beta = .158, p = .275$). The slopes for 1.5 generation ($\beta = -.308, p = .059$) and 2nd generation students ($\beta = -.292, p = .055$) were not significantly different from the slope for 1st generation students at mean values of relational self-construal (see Figure 12). The interactions between relational self-construal and 1.5 generation status ($\beta = -.011, p = .949$) and relational self-construal and 2nd generation status ($\beta = -.096, p = .570$) were also not significant.

Finally, in the test of collective self-construal, the inclusion of the interaction terms did not explain a significant amount of variance in academic satisfaction, $\Delta R^2 = .002, \Delta F(2, 168) = .147, p = .864$. The effect on academic satisfaction of being 1.5 generation compared to 1st generation ($\beta = -.393, p = .017$) and 2nd generation compared to 1st generation ($\beta = -.349, p = .024$) was significant at mean values of collective self-construal. However, the simple slope of collective self-construal ($\beta = -.042, p = .746$) however was not significant (see Figure 13) and the interaction terms were nonsignificant, as well ($\beta_{1.5G} = .074, p = .663; \beta_{2G} = .081, p = .599$).

Overall, generational status was a nonsignificant moderator of the relationship between self-construal and academic satisfaction for all dimensions of self-construal. The simple slope of self-construal was not significant while the effect of generation was significant for mean levels of self-construal except for relational self-construal.

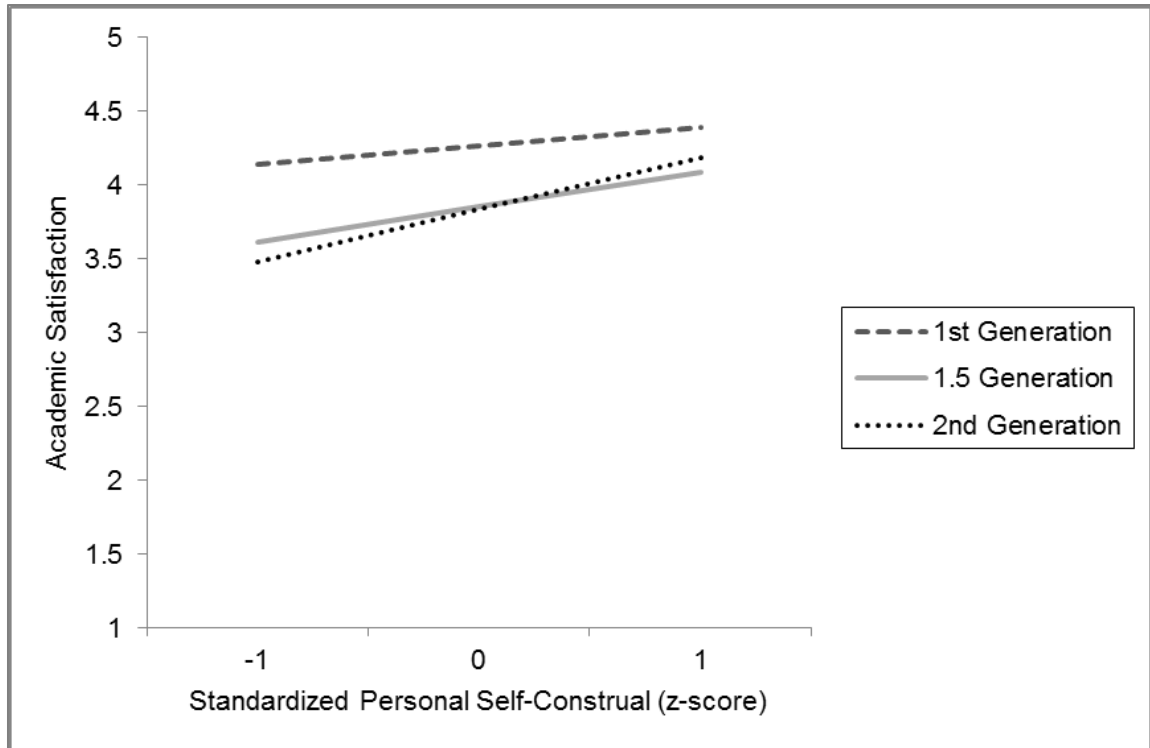


Figure 11. Plot of Effects of Personal Self-Constraint and Generational Status on Academic Satisfaction. *Note.* Self-construal has been standardized ($M = 0$, $SD = 1$).

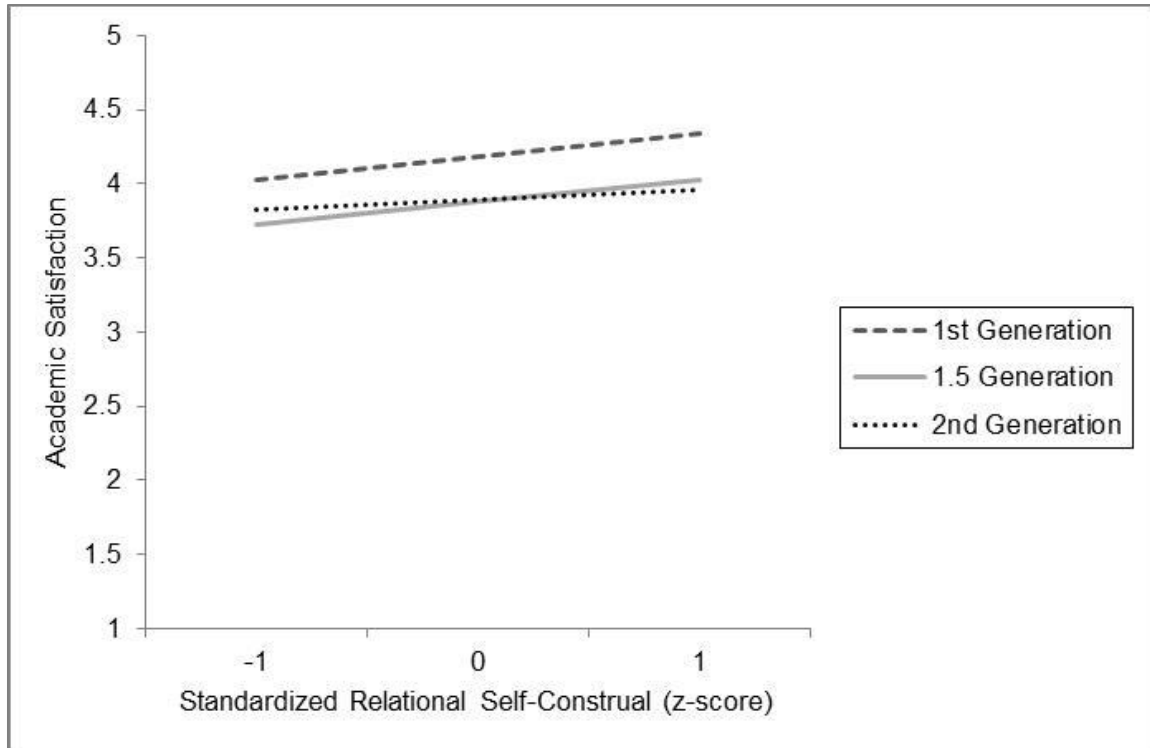


Figure 12. Plot of Effects of Relational Self-Construct and Generational Status on Academic Satisfaction. *Note.* Self-construct has been standardized ($M = 0$, $SD = 1$).

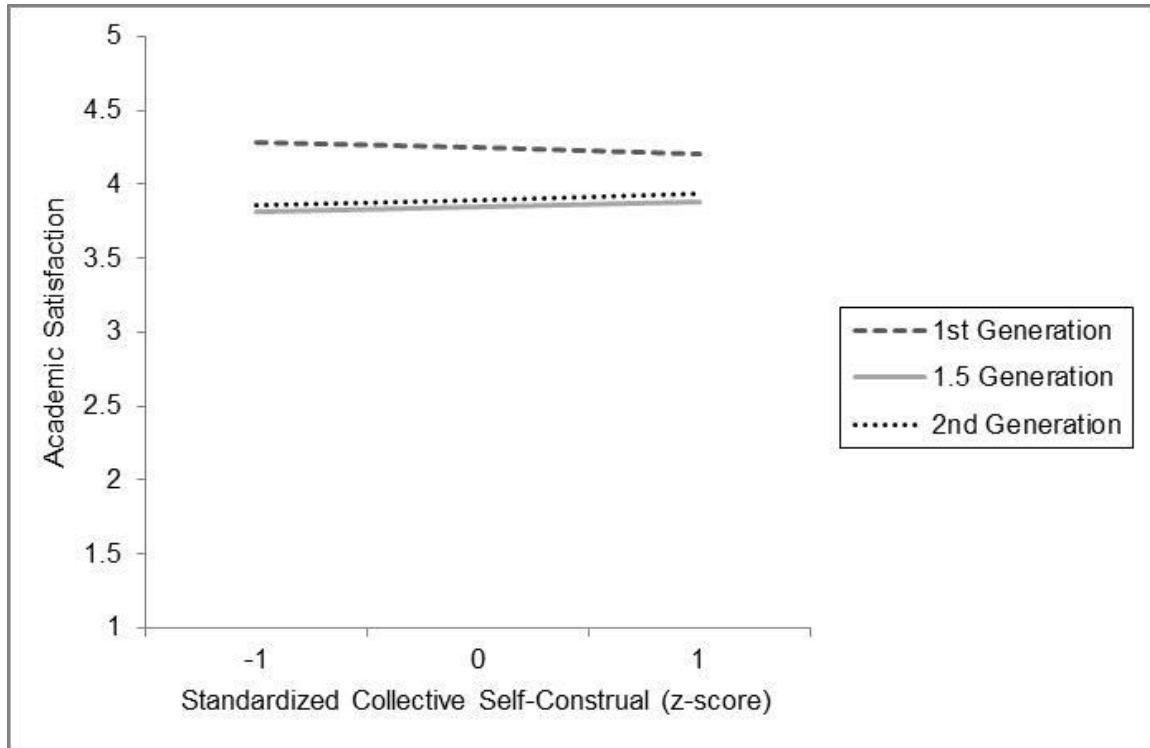


Figure 13. Plot of Effects of Collective Self-Constraint and Generational Status on Academic Satisfaction. *Note.* Self-construal has been standardized ($M = 0$, $SD = 1$).

CHAPTER 6: DISCUSSION

Enjoying one's academic life is an important part of any student's college experience. Therefore, exploring factors that contribute to positive academic experiences for African students is a worthwhile endeavor. Attention should also be paid to factors that may capture these students' bicultural reality and help explain their level of satisfaction with their academic experience. The present study was aimed at examining whether the predictors of the SCCT satisfaction model (Lent, 2004; Lent & Brown, 2006, 2008) would explain significant variance in academic satisfaction for African students attending U.S. universities. It was also designed to assess whether different forms of self-construal, a cultural trait variable, could explain a significant amount of variance in African students' academic satisfaction after controlling for the social cognitive factors.

Social Cognitive Predictors

Direct effects. The social cognitive variables were significant predictors of academic satisfaction in this sample of African students. All of the individual paths of the model were hypothesized to be statistically significant and evidence was found in support of the majority of these hypotheses: academic self-efficacy, academic outcome expectations, and academic goal progress yielded significant direct paths to academic satisfaction. These significant findings are consistent with the results of previous tests of the model and lend further empirical support for the SCCT satisfaction model (Lent et al., 2005; Lent et al., 2007).

However, some nonsignificant direct paths were also observed. The nonsignificant path coefficient between academic support and academic goal progress was inconsistent with most of the previous studies reviewed herein (e.g., Duffy & Lent,

2009; Lent et al., 2005; Lent et al., 2007; Lent et al., 2011). Instead of a direct path from academic support to academic goal progress, this relationship was mediated by academic self-efficacy in the current sample. Such a mediated pathway was observed in a few other studies involving Mexican American (Ojeda et al., 2011) and Taiwanese (Sheu et al., 2011) students. This pattern suggests that academic support may serve to bolster academic self-efficacy which, in turn, promotes academic goal progress.

There was also a nonsignificant path coefficient between academic support and academic satisfaction. In their test of the model with elementary and secondary school teachers, Duffy and Lent (2009) similarly found that goal support did not directly predict job satisfaction. Ojeda (2011) tested the model in Mexican American college students and also found that enculturation and acculturation as sources of support did not directly predict academic satisfaction. In these studies, rather than producing a direct path to academic satisfaction, the pathway from academic support to academic satisfaction was mediated by other social cognitive variables.

Indirect effects. The tests of joint significance provided evidence for some of the hypothesized indirect effects. In particular, the hypothesized indirect pathway from academic support to academic goal progress was significant when mediated by academic self-efficacy but not when mediated by academic outcome expectations. This finding is in line with the results of three previous studies (Lent et al., 2005; Lent et al., 2007; Ojeda et al., 2011), which did not support a significant indirect relationship between supports and goal progress when mediated by outcome expectations.

The pathway from academic support to academic satisfaction was indirect through academic outcome expectations as well as through the academic self-efficacy. Although

academic outcome expectations were directly related to academic satisfaction, the indirect path from outcome expectations to satisfaction via goal progress was not significant. In addition to its direct path to satisfaction, self-efficacy was linked to satisfaction indirectly through goal progress but not, as anticipated, through outcome expectations.

Self-Construal Variables

In addition to testing the social cognitive predictors of the model, the role of self-construal as a predictor of academic satisfaction among African students was examined. The results of the path analysis showed that the direct paths from the three types of self-construal to academic satisfaction were not significant. This finding is generally consistent with other studies that have tested the direct relations of cultural variables to academic satisfaction. Sheu et al. (2011) tested independent and interdependent self-construal in the SCCT satisfaction model and found that only interdependent self-construal (analogous to relational and collective self-construal) predicted academic stress but not academic satisfaction. Hui et al. (2013) and Ojeda et al. (2011) also did not obtain significant direct effects between their cultural variable, enculturation and acculturation, and academic satisfaction.

These results may indicate that cultural differences do not directly predict academic satisfaction. Rather, the relationship between cultural indicators and academic satisfaction may be mediated by other factors. For example, in the present study personal and relational self-construal were related to academic satisfaction indirectly via social cognitive variables. Similarly, in the Sheu et al. (2011) study, the relation of interdependent self-construal to academic satisfaction was mediated by academic

supports. This suggests that self-construal may link to academic satisfaction indirectly, in part by shaping the ways in which people access academic supports and perceive their academic efficacy and the outcomes of their academic efforts.

Variance Explained and Model-Data Fit

It was found that the social cognitive variables explained nearly sixty percent of the variance in academic satisfaction among African students. It was hypothesized that the cultural factor, self-construal, would help to explain additional variance in academic satisfaction beyond the proportion of variance explained by the social cognitive factors. However, this hypothesis was not supported by the results of this study. Though the inclusion of self-construal in the present study revealed significant direct effects between each type of self-construal and academic support, it did not explain additional variance in academic satisfaction after accounting for the social cognitive variables. This was further evidence that for African students, self-construal does not have a unique effect on academic satisfaction. One reason may be that students rated their self-construal in a nonspecific context whereas their satisfaction ratings were specific to their academic life. Perhaps if students had rated their personal, relational, and collective self-construal within an academic setting, self-construal might have accounted for unique variance in academic satisfaction.

In terms of model testing, adding self-construal to the social cognitive model resulted in mixed findings. Model 1 (personal self-construal) showed non-optimal fit, while models 2 (relational self-construal) and 3 (collective self-construal) produced good fit to the data. Following the modification indices and the goal of parsimony, an alternative model was tested which included all three self-construal variables and allowed

paths from personal self-construal to both academic self-efficacy and academic outcome expectations. This model resulted in improved model fit when compared to a model that did not include the latter paths. Conceptually, these paths may be justified because personal self-construal is associated with self-direction and, at a trait level, those who generally see themselves as capable of exercising self-direction may be more likely to hold favorable beliefs about their efficacy and the results of their actions.

Limitations

This study offers insight into the experiences of 1st, 1.5, and 2nd generation African students attending U.S. universities. However, there are clear limitations of this study that should be taken into consideration for future research and generalizability purposes. First, it should be cautioned that, though African immigrants share certain general features, Africa is comprised of fifty-four different countries (only 24 of which were represented in the present sample), each of which exhibits its own complex cultural diversity (Hatton & Williamson, 2003; Stebleton, 2010). Thus, the findings of this study should not necessarily be assumed to apply at the country-specific level. What this study offers is an initial exploration of the factors that predict academic satisfaction for African students in general. It would not be surprising if a more granular analysis at the country/ethnicity-level resulted in different outcomes.

Second, the external validity of this study is also limited by the fact that only students attending 4-year universities (rather than, say, community colleges) in the US were surveyed. The structure of community colleges and other postsecondary institutions differ from 4-year universities in enough ways that the findings of the present study should not be assumed to apply to all college-going students (Horn, Nevill, & Griffith,

2006). An extension of the present study could examine the academic satisfaction experiences of African students in other types of academic settings since, for many African immigrants, technical schools or community colleges are the primary pathway to educational attainment upon arriving in the US.

A third limitation is the high nonresponse rate. An exact count of the number of students who received the survey link is impossible to calculate since it was shared via many third parties to groups and listservs. However, the author estimates that over 3,000 individuals received the email invitation. A high nonresponse rate can be problematic because it does not allow for accurate probability-based inferences, puts the quality of the survey data into question, and increases the likelihood of nonresponse bias (Peytchev, 2013). It should be noted that many of the students in this study were members of African affinity clubs. Thus, the students who responded may differ from those who did not respond in their level of social connectedness and identification with their African culture.

A fourth limitation of this study was that self-construal was conceptualized in a non-domain-specific manner. It would be important to see if framing self-construal within the context of one's academic life would result in stronger relationships between self-construal and the sociocognitive factors. It may be the case that global self-construal correlates with global life satisfaction but when the framework under study is constrained to satisfaction with one's academic life, items tapping one's sense of self within an academic context would offer a more appropriate measure of the construct.

The cross-sectional nature of this study is a fifth limitation (Maxwell & Cole, 2007). The design of this study did not permit causal inferences regarding the relations

among the factors. To test the temporal predominance of the factors, future research could employ longitudinal analyses of the SCCT satisfaction model with African students in the US, similar to the designs used by Lent et al., (2009) and Singley et al. (2010). Experimental methods would be necessary to adequately test the hypothesized causal relations among the factors.

There are also a number of methodological limitations that should be considered. First, the reliability estimate of the personal self-construal subscale was lower than expected. As such the personal self-construal items in the SSCS may not be reliably tapping the construct of independent self-construal in African students. When the sample was split between those born in the US and those born abroad, the estimate increased to .71 for U.S.-born students. The estimate for African students born abroad was $\alpha = .57$, suggesting that the subscale may not be an ideal measure of personal-level self-construal for foreign-born African students, in particular. Because the SSCS has not yet been widely used, further research is needed on its psychometric properties in different cultural contexts.

Second, the use of measured variable path analysis in this study meant that measurement error could not be controlled in the analysis. Replications and extensions of this study might, therefore, aim for a larger sample size, which would better support the use of latent variable path analysis.

Finally, although a final model was proposed in this study, this final model was based on modification indices. Modification indices are used to improve model fit by freeing a parameter in the model (e.g., adding a new path) and, therefore, shift the analysis from confirmatory to exploratory (Ullman, 2006). Reliance on modification

indices is cautioned since researchers run the risk of capitalizing on sample-specific chance findings (Hox & Bechger, 1998; MacCallum, Roznowski, & Necowitz, 1992). Furthermore, if the initial theoretical model is wrong, proposed modification indices will not necessarily uncover the “true” model (Ullman, 2006). Models developed using modification indices should be cross-validated on a different sample. Researchers should also revisit the theoretical framework to determine if there is theoretical justification for proposing the model changes (MacCallum et al., 1992).

Implications for Research and Practice

Little research exists on the adjustment and satisfaction experiences of African college students in the United States. This study represented an initial foray into research on the academic experiences of African students. The findings revealed that academic self-efficacy, academic outcome expectations, and academic goal progress are associated with academic satisfaction for African students. It also demonstrated that self-construal, no matter how it was operationalized, did not directly predict academic satisfaction among African students. However, its relation to satisfaction was mediated by particular social cognitive variables. For example, those with higher relational self-construal perceived that they received greater academic support, whereas those with higher personal self-construal held more favorable beliefs about their self-efficacy and anticipated outcomes. These findings point to the ways in which the cultural trait of self-construal may operate along with the social cognitive variables vis-à-vis academic satisfaction.

This study adds to the small but growing set of studies that have tested the social cognitive model of satisfaction in racial-ethnic minority samples. For example, Hui et al.

(2013) studied satisfaction in the academic and social life domains of Asian American students and found that the model fit the data well in both domains. In the present study, the SCCT satisfaction model resulted in good model fit in the academic life domain, with some modifications to accommodate the paths involving self-construal. The results of these studies should encourage additional research exploring the validity of this model in other life domains for African students. One such domain might be students' family or social lives.

The supplemental analysis of this study revealed that U.S.-born and foreign-born Africans differed little in their mean scores on the variables of the SCCT satisfaction model. Future research might explore whether these groups differ in terms of the fit of the satisfaction model. It would also be interesting to explore whether either of these groups differs from multi-generational Black American students in terms of model-data fit. Such research could further clarify the role of cultural exposure and ethnic group identification in the context of testing the social cognitive model.

The results of this study also have practical implications for efforts to promote the academic experiences of African college students. First, academic mentors could leverage the relational self-construal of African students by establishing a relationship with these students that offers models of, and supports for, academic success. Mentors might assign African students specific academic milestone-related tasks in order to foster academic efficacy, promote positive academic expectations, and provide tools to accomplish academic goals. Having specific tasks provides students with goals to work towards and opportunities to build their efficacy through successful completion of these tasks. In addition, the mentorship relationship provides African students a focal relationship from

which they can draw guidance, an important aspect of the relational self-construal.

Second, counselors might integrate the relational self-construal of African students to better support them. Idowu (1985) wrote that counselors working with African students should (a) consider group counseling over individual therapy as the emphasis on group interaction is congruent with their cultural preferences; (b) take a more directive approach; (c) validate African students' need to consult with family on important academic decisions; and (d) recognize the dual cultural atmospheres in which African students must exist. The results of this study are consistent with these recommendations. African students high in relational self-construal may benefit from these recommendations because they involve group-centric activities.

One final question of empirical and practical interest is the extent to which academic satisfaction carries meaning across cultures. Though path analytic tests of the model using different populations have resulted in good model fit and significant parameter estimates, these findings may not necessarily mean different populations conceive of academic satisfaction in the same way or that academic satisfaction holds the same weight across cultures (Harachi, Choi, Abbott, Catalano, & Bliesner, 2006). Straus (1969) wrote that the "use of the identical procedures in different societies for eliciting and quantifying data ('phenomenal identity') does not necessarily result in the measurement of the same variable ('conceptual equivalence') since the stimuli (questions, tasks, items) used to elicit data may have different meanings in different societies" (p. 233). Future research might delve more deeply into understanding if academic satisfaction in African students means the same thing as it does for students of other ethnic backgrounds. Herdman, Fox-Rushby, and Badia (1998) suggest that

evidence of conceptual equivalence is not achieved by translation or *post hoc* analysis of data. They propose that conceptual equivalence be examined through "...careful research...to determine how [constructs] are conceptualized in other cultures, particularly in terms of the nature of and emphasis on particular domains" (Herdman et al., 1998, p. 324).

Summary

This study is the first empirical test of the Lent (2004) SCCT satisfaction model in African students attending U.S. universities. It was hypothesized that the study would offer a good model for understanding academic satisfaction in African students, and that the cultural variable, self-construal, would augment the social cognitive model in explaining academic satisfaction. Although self-construal did not emerge as a unique, direct predictor of academic satisfaction, it was indirectly linked to satisfaction by way of its relationships with the social cognitive predictors. The results of this study contribute to an understanding of factors that may facilitate African college students' adjustment to the college environment in the US. They may also inform counselors about targets for preventive and developmental academic interventions with African college students (e.g., promoting academic self-efficacy and goal progress). In addition to interpreting the findings, this section noted the study's limitations along with several directions for future research on how social cognitive factors and cultural factors work together to promote the academic satisfaction of African college students in the US. Hopefully, improved understanding of these factors will lead to the development of interventions that benefit African students in the future.

Appendix A

Email Invitation

Hi (Insert Name),

My name is Ijeoma Ezeofor and I'm a graduate student at the University of Maryland, College Park. You are receiving this email because you may be from an African country or the child of someone from an African country. As a Nigerian, I'm very interested in learning about the college adjustment of students of African descent, those born in the US and abroad. I'd like to invite you to participate in a survey about your college experiences.

The study should take about **10-15 minutes** to complete. I hope you will take the time to fill out this brief survey. Although, I cannot directly compensate you for your time, I would like to show my appreciation by inviting you to participate in a raffle to **win 1 of 20 \$4 Amazon MP3 gift cards**. To enter you'll be redirected to another page where you'll leave your name and email address but don't worry, your survey information will not be connected to your name and email address.

Your participation in this study is highly appreciated. The information you provide will help us better understand the academic experiences of African students in US colleges. In turn, this information will hopefully help future counselors understand the specific needs and experiences of this unique group. Your responses will be anonymous so you're encouraged to answer in any way that feels right for you. **NOTE: You must be 18 years or older to participate in this study.**

Participation in this survey is completely voluntary. The information you provide will be kept confidential; no personally identifiable information will be collected and all information will only be reported in the aggregate. You also have the option to opt out of the survey at any point.

Follow this link to the Survey: [Take the Survey](#)

Or copy and paste the URL below into your internet browser:

[https://umd.qualtrics.com/WRQualtricsSurveyEngine/?Q_SS=0pmgniNo25nos4t_26szP_Cf2UGzmOoZ&_ =1](https://umd.qualtrics.com/WRQualtricsSurveyEngine/?Q_SS=0pmgniNo25nos4t_26szP_Cf2UGzmOoZ&_=1)

If you have any questions, please email me at africancollegesurvey@gmail.com. Thanks in advance for your time!

Ijeoma

This research (#338648-3) has been approved by the University of Maryland, College Park Institutional Review Board according to the procedures for research involving

human subjects. This research is being conducted by Ijeoma Ezeofor, M.A., in the Department of Counseling, Higher Education, and Special Education, under the supervision of Robert W. Lent, Ph.D., in the Department of Counseling, Higher Education, and Special Education at the University of Maryland, College Park. If you have any questions regarding your rights as a participant in this research, you can contact: University of Maryland College Park Institutional Review Board Office, 1204 Marie Mount, College Park, MD 20742 (301-405-0678; irb@umd.edu).

Recruitment Flyer

Are you an African undergraduate student born in the US or abroad attending a US university?

Are you 18 years or older?

If you answered **YES** to both questions, we would like you to participate in a **10-15 min UMD graduate research study** about your academic experiences

To complete the survey, go to:
<http://tinyurl.com/pgrlpwe>

Or if you can't get to a computer now - "Grab a Tab" below and complete the survey later.

As appreciation, you may enter a raffle to **win 1 of 20 \$4 Amazon MP3 Gift Cards.**

Questions? Comments? Concerns?
Email: africancollegesurvey@gmail.com

African College Students' Survey

<http://tinyurl.com/pgripwv>

Questions: africancollegesurvey@gmail.com

African College Students' Survey
<http://tinyurl.com/nc9t8w6>

<http://tinyurl.com/pqrlpwe>

Questions: africancollegesurvey@gmail.com

African College Students' Survey
<http://tinyurl.com/ncrlwqe>

<http://tinyurl.com/pgripwe>

Questions: africancollegesurvey@gmail.com

African College Students' Survey
<http://inurl.com/ncfowe>

<http://tinyurl.com/pqrlpwe>

Questions: africancollegesurvey@gmail.com

African College Students' Survey
<http://tinyurl.com/ortpwe>

<http://tinyurl.com/pq9nwe>

Questions: aftricancollegesurvey@gmail.com

<http://tinyurl.com/pa1rwe>

<http://tiny.cc/9wllpww>

Questions: africancollegesurvey@gmail.com

<http://tinyurl.com/pa1rlowe>

<http://www.civilization.ca>

Questions: africancollegesurvey@gmail.com

<http://tinyurl.com/pqr1pwe>

<http://tinyurl.com/pqllpwe>

Questions: allcalcollegesurvey@uclaall.com

<http://tinyurl.com/pqr1pwe>

http://www.bps.org.uk

www.dhammadownload.com

<http://tinyurl.com/pqr1pwe>

ආරක්ෂක අංශයේ සේවයේ යෙදවීමේදී සහතිකයක් ලෙස භාවිතයට යොදා ගත හැකි වනු ඇතැයි සිතමුණි.

<http://tinyurl.com/pa1l9we>

www.pearsoned.com.au/education/vce/units/34

<http://tinyurl.com/pgrlpwe>

Questions: africancollegesurvey@gmail.com

Appendix C

Informed Consent Form

Project Title	African College Students' Academic Experiences
Purpose of the Study	<p>This research is being conducted by Ijeoma Ezeofor, M.A., under the supervision of Robert W. Lent, Ph.D., Department of Counseling, Higher Education, and Special Education, at the University of Maryland, College Park. We are inviting you to participate in this research project because you are at least 18 years old, an undergraduate student, and have self-identified as being from an African country or the child of someone from an African country. The purpose of this research is to better understand the factors that help students of African descent adjust to their college environment.</p>
Procedures	<p>The procedures of this study involve your participation in a brief survey. It should require about 10 to 15 minutes of your time. The survey will ask you about your academic experiences in college.</p> <p>At the end of the survey, you will be taken to a separate page where you will be asked to enter your first name as well as an email address should you wish to be entered into a raffle to win one of 20 \$4 Amazon MP3 Gift Card as a token of our appreciation. Your contact information will not be connected to your survey responses.</p>
Potential Risks and Discomforts	<p>There are no known risks associated with participating in this research study.</p>
Potential Benefits	<p>Although there are no direct benefits from your participation in this research study, the results of the study may help the investigators understand more about the factors that facilitate adjustment in the college environment for college students of African descent. Through improved understanding of these factors, we hope to support the development of interventions that will be helpful to counselors and college student personnel in assisting future college students of African descent.</p>
Confidentiality	<p>You will not be required to provide any information that may link your identity to your survey responses. For those participants who submit their email addresses for the raffle, only the investigator will have access to it.</p> <p>We will do our best to minimize any potential loss of confidentiality. The data will be collected via an online survey provider and stored in the survey provider's database, which is only accessible with a password. Once the information is downloaded from the online survey provider, it will be stored in a password-protected laptop computer. Permission will only be given to the investigators to access the data. Any reports based on the survey</p>

	information will only present the results in aggregate form (e.g., group averages). Individual survey responses will never be reported.
Right to Withdraw and Questions	<p>Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.</p> <p>If you have questions, concerns, or complaints, please feel free to contact the investigator(s): Ijeoma Ezeofor, M.A., at ijeoma@umd.edu; 3210 Benjamin Building, University of Maryland, College Park, MD 20742 or Robert W. Lent, Ph.D. at boblent@umd.edu; 3207 Benjamin Building, University of Maryland, College Park, MD 20742; (301) 405-2878</p>
Participant Rights	<p>If you have questions about your rights as a research participant, please contact:</p> <p style="text-align: center;"> University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678 </p> <p>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</p>
Statement of Consent	<p>By selecting your choice below you are indicating your right to consent or not consent electronically. Selecting “Yes, I DO Consent” and clicking on the “Next” button below indicates that you are at least 18 years old and have read and understand the terms of this study and thus voluntarily agree to participate. If you do NOT wish to participate in this study, please select “No, I DO NOT Consent” and click “Next” to decline participation.</p>

Appendix D

Academic Self-Efficacy Scale

Part I. Instructions: The following is a list of major steps along the way to completing an undergraduate degree. Please indicate how much **confidence you have in your ability to complete each of these steps in relation to the academic major** that you are most likely to pursue. Use the 0-9 scale below to indicate your degree of confidence.

How much confidence do you have in your ability to complete the following tasks as a college student?

	No Confidence			Some Confidence			Complete Confidence			
	0	1	2	3	4	5	6	7	8	9
1. Remain enrolled in your intended major over the next semester	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Remain enrolled in your intended major over the next two semesters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Excel in your intended major over the next semester	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Excel in your intended major over the next two semesters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Complete the upper level required courses in you intended major with overall grade point average of B or better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part II. Instructions: Here we are interested in knowing how well you believe you could cope with each of the following barriers, or problems, that students could possibly face in pursuing an undergraduate degree. Please indicate your **confidence in your ability to cope with, or solve, each of the following problem situations**. Use the 0-9 scale below to indicate your degree of confidence.

How much confidence do you have in your ability to:	No Confidence			Some Confidence				Complete Confidence		
	0	1	2	3	4	5	6	7	8	9
1. Cope with a lack of support from professors or your advisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Complete a degree despite financial pressures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Continue on in your intended major even if you did not feel well-liked by your classmates or professors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Find ways to overcome communication problems with professors or teaching assistants in your courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Balance the pressures of studying with the desire to have free time for fun and other activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Continue on in your intended major even if you felt that, socially, the environment in these classes was not very welcoming to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Find ways to study effectively for your courses despite having competing demands for your time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix E

Academic Support Scale

Instructions: Many factors can either support or hinder students' academic and social adjustment. Here we are interested in learning about the types of situations that may support your progress in your intended major. Using the 1-5 scale, please indicate how much you agree or disagree with each of the following statements.

At the present time...	Strongly Disagree 1	Disagree 2	Unsure 3	Agree 4	Strongly Agree 5
1. Have access to a "role model" (e.g., someone I can look up to and learn from by observing) in my academic major	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Feel support from important people in my life (e.g., teachers) for pursuing my intended major	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Feel that there are people "like me" in this academic field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Get helpful assistance from a tutor, if I felt I needed such help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Get encouragement from my friends for pursuing my intended major	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Get helpful assistance from my advisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Feel that my family members support the decision to major in my intended field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Feel that close friends or relatives would be proud of me for majoring in my intended field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Have access to a "mentor" who could offer me advice and encouragement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix F

Academic Goal Progress Scale

Instructions: Now we would like for you to rate the following academic goals in terms of how much progress you are making toward each one at this point in time. That is, indicate how effectively you feel you are meeting or working toward each goal at present. Using the 1-5 scale provided, please rate how much progress you feel you are making.

How much progress do you think you are making toward each of the following goals at this point in time?

	No Progress At All	A Little Progress	Fair Progress	Good Progress	Excellent Progress
	1	2	3	4	5
1. Excelling at your academic major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Completing all course assignments effectively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Studying effectively for all of your exams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Remaining enrolled in your academic major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Completing academic requirements of your major satisfactorily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Achieving/maintaining high grades in all of your courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Learning and understanding the material in each of your courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix G

Academic Outcome Expectations Scale

Instructions: Students' expectations about certain future outcomes can play a role in their adjustment to their academic environments. We are interested in how certain expectations about your academic major may influence your academic experience. Using the 1 – 10 scale provided, please rate how much you agree or disagree with the following statements.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	1	2	3	4	5	6	7	8	9	10
Graduating with my degree will allow me to...										
1. ... receive a good job offer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. ... earn an attractive salary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. ... get respect from other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. ... do work that I would find satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. ...increase my sense of self-worth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. ... have a career that is valued by my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. ... do work that can "make a difference" in people's lives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. ... go into a field with high employment demand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. ... do exciting work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. ... have the right type and amount of contact with other people (i.e., "right" for me)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix H

Academic Satisfaction Scale

Instructions: Using the 1- 5 scale below, indicate your level of agreement with each of the following statements.

At the present time...	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
1. I feel satisfied with the decision to major in my intended field.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am comfortable with the educational atmosphere in my major field.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. For the most part, I am enjoying my coursework.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am generally satisfied with my academic life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I enjoy the level of intellectual stimulation in my courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I feel enthusiastic about the subject matter in my intended major.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I like how much I have been learning in my classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix I

Six-fold Self-Construal Scale (SSCS)³

Instructions: The following statements represent a variety of ways in which your feelings, thoughts, and actions might be shaped by your relationships with yourself and others. Using the 1-7 scale, please indicate the extent to which each of the statements applies to you.

	To a Very Small Extent 1	2	3	To a Moderate Extent 4	5	6	To a Very Large Extent 7
1. I think of myself as connected (linked) to myself (<i>I am a unique person separate from others</i>).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am affected by events that concern (relate to) the African community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I feel I have a strong relationship with my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am aware of the needs, desires, and goals of myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I am affected by events that concern (relate to) my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I control my behavior to accommodate the wishes (interests) of my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I am aware of the needs, desires, and goals of my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I control my	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

³ Participants selected their African ethnicity at the start of the survey and their selection was then populated into the demographic questionnaire such that instead of “*African community*,” students saw, for example, “*Liberian community*”.

	behavior to accommodate the wishes (interests) of myself							
9.	I think of myself as connected (linked) to the African community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	I think of myself as connected (linked) to my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	I feel I have a strong relationship with the African community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12.	I control my behavior to accommodate the wishes (interests) of the African community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13.	I feel I have a strong relationship with myself (<i>I act as an independent person</i>).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14.	I am aware of the needs, desires, and goals of the African community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15.	I am affected by events that concern (relate to) myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix J

Demographic Questionnaire⁴

Gender	<input type="radio"/> Male	<input type="radio"/> Female
Year of Birth	_____	
Family's Origin	_____	
Your Country of Birth	<input type="radio"/> US	<input type="radio"/> Other, please explain: _____
If born outside the US, are you a U.S. Citizen	_____	
If born outside the US, number of years in the US	_____	
Country of (Family's) Origin	_____	
Generational Status	<input type="radio"/> 1 st Generation: You were African-born (or abroad) and came to the US after high school <input type="radio"/> 1.5 Generation: You were African-born (or abroad) and came to the US before or during high school <input type="radio"/> 2 nd Generation: You were born in the US and one or both of your parents is African <input type="radio"/> Other, please explain: _____	
Number of African Parents	<input type="radio"/> 1	<input type="radio"/> 2
Are you an international student (e.g. F-1 visa holder)?	<input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> Other, please explain: _____

⁴ Participants selected their African ethnicity at the start of the survey and their selection was then populated into the demographic questionnaire such that instead of "*African-born*," students saw, for example, "*Liberian-born*".

Are you the 1 st in your family to go to college?	<input type="radio"/> No, one or more of my parents went to college in the US <input type="radio"/> No, one or more of my siblings went to/is in college in the US <input type="radio"/> Yes, I am the 1 st in my family to go to college in the US <input type="radio"/> Other, please explain: _____	
Level in University	<input type="radio"/> Freshmen <input type="radio"/> Sophomore <input type="radio"/> Junior <input type="radio"/> Senior <input type="radio"/> Other, please explain: _____	
University Type	<input type="radio"/> 4-year college <input type="radio"/> 2-year college <input type="radio"/> Other, please explain: _____	
University Region	<input type="radio"/> Northwest (e.g., OR, WY, MT) <input type="radio"/> West (e.g., CA, AK, HI) <input type="radio"/> Southwest (e.g., TX, OK, UT) <input type="radio"/> Midwest (e.g., KS, NE, IN) <input type="radio"/> Southeast (e.g., FL, LA, NC) <input type="radio"/> Northeast (e.g., MA, CT, ME) <input type="radio"/> Mid-Atlantic (e.g. VA, MD, NY)	
University Major	_____	
Cumulative Undergraduate GPA (on a 4.0 scale) _____		
Mother's Highest Education	<input type="radio"/> Below high school <input type="radio"/> High school <input type="radio"/> Some college <input type="radio"/> Associate's Degree	<input type="radio"/> Bachelor's Degree <input type="radio"/> Graduate Degree (MA, MS, PhD, etc.) <input type="radio"/> Professional Degree (MBA, JD, MD, etc.) <input type="radio"/> Other, please explain: _____
Father's Highest Education	<input type="radio"/> Below high school <input type="radio"/> High school <input type="radio"/> Some college <input type="radio"/> Associate's Degree	<input type="radio"/> Bachelor's Degree <input type="radio"/> Graduate Degree (MA, MS, PhD, etc.) <input type="radio"/> Professional Degree (MBA, JD, MD, etc.) <input type="radio"/> Other, please explain: _____

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